

TENTH ANNUAL REPORT ON
HEALTH RESEARCH FACILITIES
BY THE SURGEON GENERAL OF THE
PUBLIC HEALTH SERVICE

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE TENTH ANNUAL REPORT OF THE SURGEON GENERAL
OF THE PUBLIC HEALTH SERVICE SUMMARIZING THE
ACTIVITIES OF THE HEALTH RESEARCH FACILITIES PRO-
GRAM, PURSUANT TO THE PROVISIONS OF TITLE VII-A OF
THE PUBLIC HEALTH SERVICE ACT, AS AMENDED

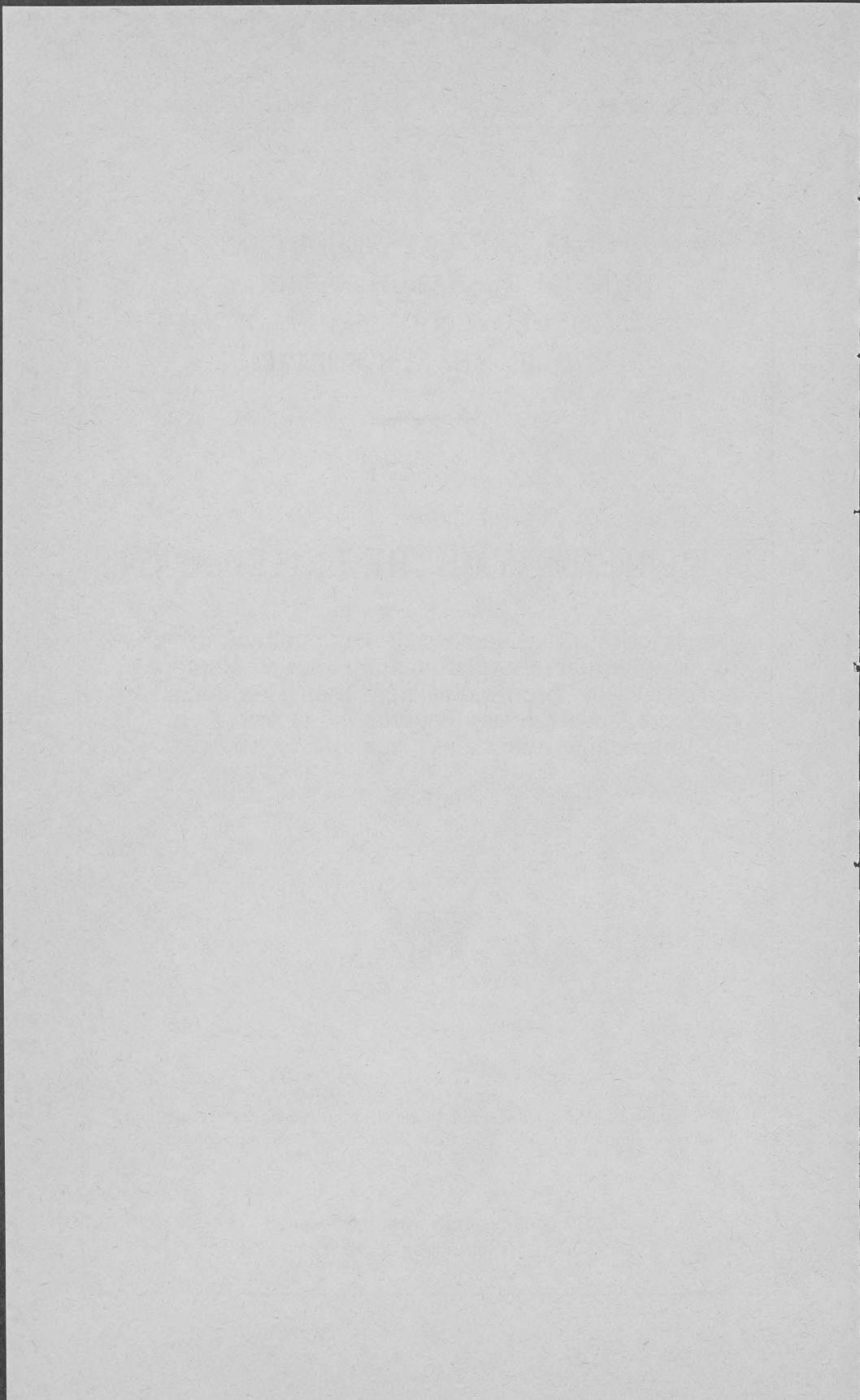


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WASHINGTON : 1966



LETTER OF TRANSMITTAL

To the Congress of the United States:

The decade since 1956 has been one of unprecedented efforts in health research—and in future years, our commitment to this vital field will grow.

Success for our research efforts depends not only upon the dedication of thousands of professional researchers across the Nation, but upon the adequacy of the facilities available to them.

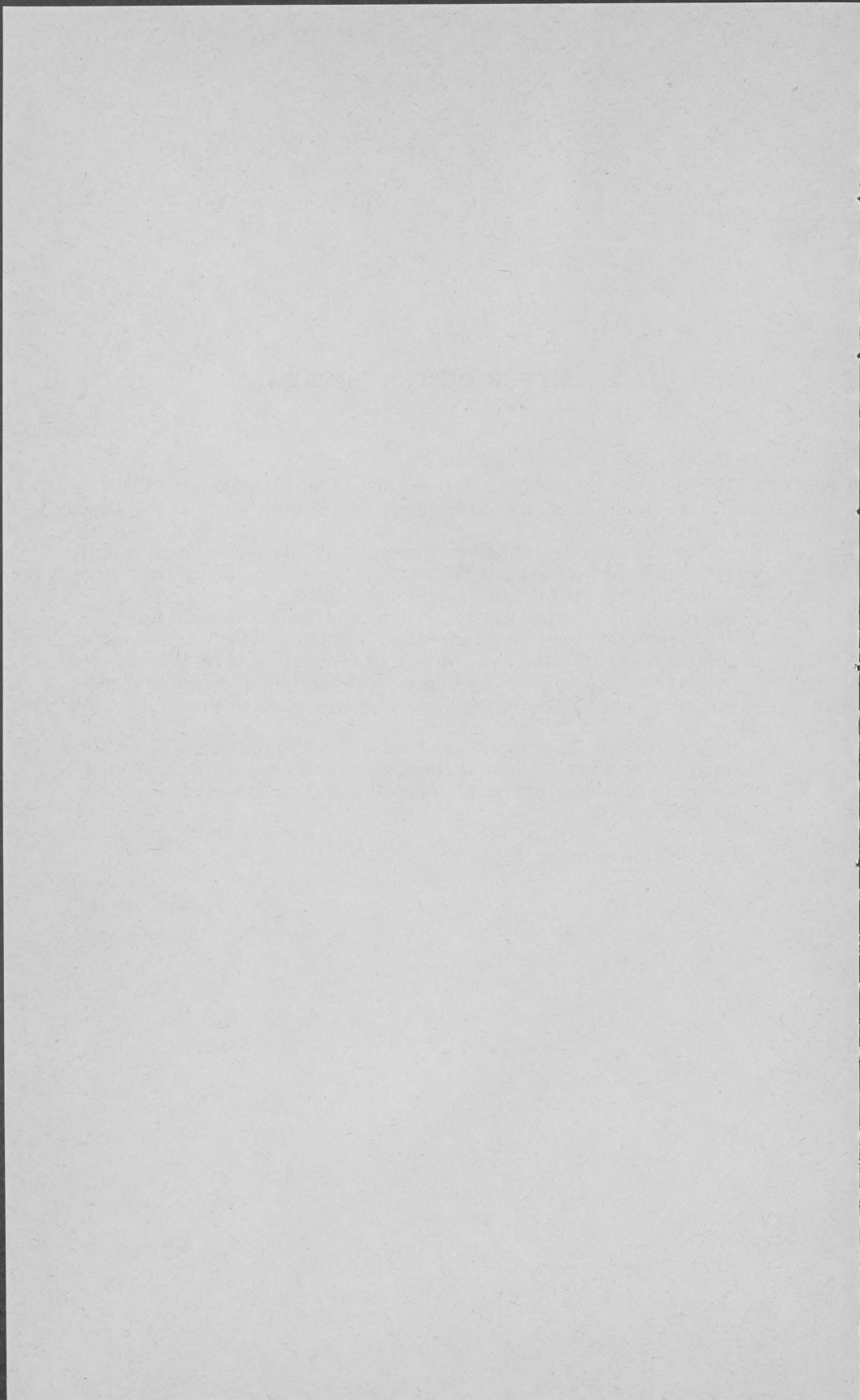
Realizing this, the Congress, through the Health Research Facilities Act, has provided since 1956 more than 1,330 matching grants totaling over \$360 million for the construction or renovation of research space.

I believe this program is an impressive example of the commitment of our people to better health—and of our success in pursuit of that national goal.

It is with pride, therefore, that I submit for the information of the Congress, the 10th Annual Report of the Surgeon General summarizing our accomplishments under the Health Research Facilities Act, as amended.

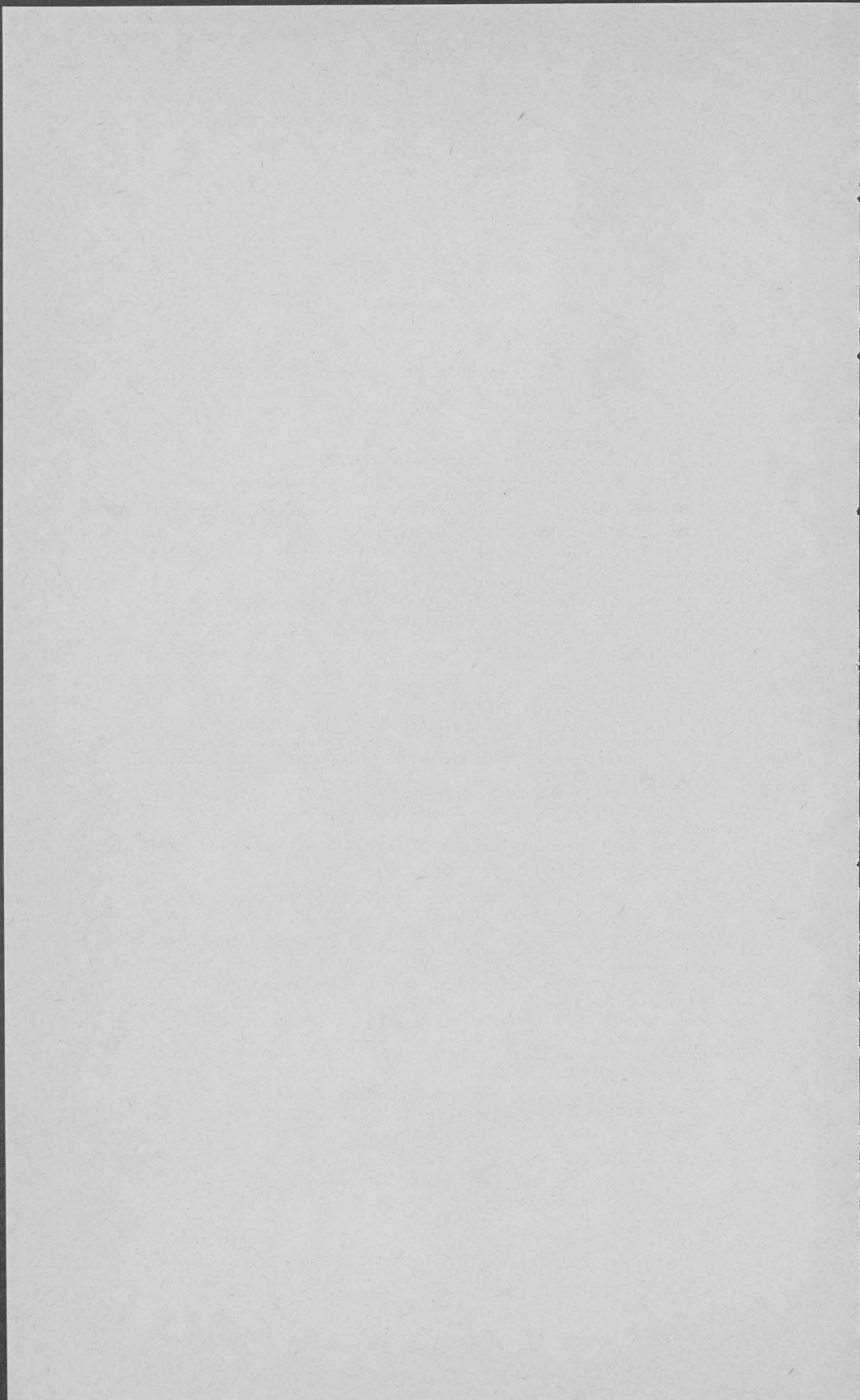
LYNDON B. JOHNSON.

THE WHITE HOUSE, *September 13, 1966.*



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TENTH ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE ON HEALTH RESEARCH FACILITIES

In accordance with the provisions of section 710 of the Public Health Service Act, as amended, this tenth annual report has been prepared in consultation with the National Advisory Council on Health Research Facilities

INTRODUCTION

This report provides a brief background of the health research facilities program, describes highlights and accomplishments during the first decade of its operation, 1956-65, and cites its unmet needs. The report also includes a narrative description of 10 representative grants made during the first 10-year period of the program, and a pictorial presentation of the program, as well as photographs of structures completed during 1965. Seven tables are included in the appendixes: (I) List of approved grants, by State, through December 31, 1965; (II) formal applications pending action as of that date; (III) notices of intent to file applications; (IV) completed projects through December 31, 1965; (V) distribution of awards by region; (VI) awards by professional discipline; and (VII) awards by type of institution.

I. PROGRAM BACKGROUND

The urgencies of World War II stimulated the organization of large research efforts, many of which were remarkably successful. With the gradual resumption of normalcy following the war, public and private agencies enthusiastically supported the continuation of biomedical research programs at a high level of activity so as to extend the wartime success in acquiring basic and applied knowledge into man's health, his life processes, and his illnesses. It quickly became apparent, however, that the research support so freely given was straining the meager physical facilities then available for biomedical investigations. Obsolete, overcrowded, and poorly equipped laboratories of ancient vintage considerably hampered research studies and threatened promised progress. These facilities, inadequate both in quality and in number, needed to be promptly replaced by modular, functional, modern laboratories quickly adaptable to the changing trends of advanced research. Responding with vision and vigor following the Korean episode, the Congress in 1956 authorized the creation of the health research facilities program. Acting promptly under this new authority, the Public Health Service was able to initiate a biomedical research facility construction program whose 10th anniversary will be commemorated this summer.

The program objectives were simple and direct—to raise the capacity and improve the quality of the health-related research environment by encouraging and supporting the construction, renovation, and equipping of modern research facilities for all sectors of the biomedical community. This was done by providing Federal funds

for up to 50 percent of the construction costs of new and improved health-related research installations. Facilities so funded are required to be used for these health-science program objectives for a minimum of 10 years. Construction grants for these purposes are awarded to institutions whose programed facilities will (a) be used for research in disciplines or diseases which have the most urgent needs; (b) are adaptable to the various methods by which research is organized or advanced; (c) will be in institutions or localities with broad research programs and potentials; and/or (d) will promote a better geographical distribution of research through assistance of established or promising new research activities in various areas of the Nation having at present relatively few such research facilities.

The program objectives require that most of these facilities be constructed as part of the expansion of our medical schools. In many instances they form part of a new complex which includes medical service and teaching facilities as well. In other cases they constitute part of a life science complex at our larger universities. In a few instances they are a part of a private nonprofit research institute. In every case, however, they serve a common purpose—the expansion of the Nation's biomedical research effort.

II. FIRST DECADE OF HEALTH RESEARCH FACILITIES PROGRAM, 1956-65

A. PROGRAM ACCOMPLISHMENTS

In this first decade of operation the health research facilities program awarded 1,330 grants totaling \$361 million to 403 different institutions for the construction and renovation of approximately 17 million square feet of modern laboratory space for advanced research. The recipient institutions furnished some \$531 million of their own funds in order that these basic facilities could be completed for use by some 80,000 individuals engaged in biomedical research activities.

Not all of this construction has been completed. Nevertheless, the facilities already in use, those coming into use each month, and those just going under construction have been significant in

(a) Reducing the gap between insufficient and outmoded installations and the Nation's need for adequate, modern, functionally designed and equipped research laboratories.

(b) Broadening the base of interdisciplinary research by provision of multidepartmental or institutional research space in which research investigators from different disciplines can coexist in their mutual search for knowledge and for solutions to the problems of those diseases which beset man.

(c) Improving the quality and increasing the quantity of biomedical research in all regions of our country.

(d) Facilitating the recruitment of qualified scientific personnel through provision of attractive and useful laboratory space.

(e) Attracting matching funds far in excess of those legally required from both public and private sources.

(f) Effecting savings in construction dollars through design of multicategorical research space for efficient use of general purpose laboratory equipment.

Although the majority of these facility grants have been awarded to existing institutions for expansion of their research capability on established sites a significant number have been made to institutions which are expanding onto new sites or are relocating all of their present facilities. In addition, facilities have been provided for six newly established schools of medicine and one new school of public health.

Of this tremendous acreage of new and renovated space about 75 percent represents an expansion of the Nation's capacity for research—some 13 million square feet. Of the remaining 4 million square feet about one-half reflects the renovation and upgrading of existing space and equipment for long-term usage and the remainder represents the replacement of inadequate and obsolete space.

B. DESCRIPTION OF 10 REPRESENTATIVE HEALTH RESEARCH FACILITY AWARDS

The next few pages contain capsule descriptions of 10 representative awards made during the past decade. These were selected to illustrate the manner in which such assistance has led to the improvement of the quality and the capacity for research at the institutions so depicted.

College of Medicine, University of Vermont, Burlington

In 1956 this institution still was conducting research activities in 50-year-old buildings, using every available inch of space including converted coalbins, closets, and restrooms. The administration had a dream of fine new facilities, to be used both for the teaching of medical students and the conduct of research. The first fulfillment of that dream came when \$495,639 of health research facility funds were allocated toward the construction costs of their phase I building whose total cost was \$1,225,927. This phase provided a new, functionally designed, modular research facility in which vital experiments on shock, hemorrhage, and the metabolic disturbances associated with extensive surgery could properly be evaluated. In 1960 the institution again received funds, this time \$708,361 toward the cost of their phase II construction which provided facilities for research in the clinical sciences. With the addition of these two structures the medical school then was in a position to attract additional, well-qualified staff with strong interests in biomedical research. The most recent award was made jointly with the Division of Hospital and Medical Facilities and provides for both teaching and research space in the phase III unit. This unit will cost \$8,710,000 of which \$1,925,000 represents the Federal share of the research facilities. In summary then, during the 10-year period under review this institution, with the assistance of three awards totaling \$3,129,000, has been able to completely rejuvenate its research program, to increase its annual base of research support from \$200,000 to \$2,500,000, and to emerge as a very important factor in biomedical research in this area of the Nation.

University of Rhode Island, College of Pharmacy, Kingston, R.I.

This institution is interested in the relationship of drugs to disease and to health. Research along these lines was restricted by existing facilities so that help was sought in 1961. A total of \$348,065 was

provided for research facilities in a new four-story building which houses both pharmacy and nursing. The total cost of the structure was \$2,031,000 and some 20,000 square feet is devoted to research. With these new facilities, which were dedicated on October 14, 1964, this school has tripled the scope of its research activities over a 3-year period. Graduate enrollments of research-minded scholars have increased 65 percent and the first university training program for Federal drug inspectors has been initiated with support from the Food and Drug Administration and the Division of Biological Standards, National Institutes of Health. The school also has a cooperative research program with staff of the Miriam Hospital in Providence in cardiovascular surgery. Drugs which speed the recovery of heart muscle following surgery are under evaluation, and an interdisciplinary group is actively working to perfect an improved aortic valve. Electronic devices designed to assist an injured heart in its mechanical contractions also are under investigation. In brief, the biomedical research potential of this institution has increased greatly and there is every indication that this trend will continue during the next decade.

Memorial Sloan-Kettering Cancer Research Center, New York

Founded in 1945 this institution has played a most important role in cancer research during the past 20 years. By 1956, however, it had become apparent to the administration that a major expansion of research endeavors was essential if all promising leads to solution of the cancer program were to be explored as rapidly as possible. A decision was reached, therefore, to construct a new basic research facility in the nearby suburb of Rye, N.Y. Research facility funds of \$1,152,750 and the institution's reserves provided a building of 94,000 square feet at a cost of \$4,166,000. This was a major move; it enabled the administration to initiate new programs of clinical research at the main building in New York and to expand the thrust of basic research at Rye. Continued growth led to the need in 1961 for a new facility in New York, across the street from the original one. This new 12-story research center cost \$8,119,244 and provided some 85,000 square feet of research area. The Federal funds of \$2,696,426 were a major contribution to the cost of this structure. This building houses a number of basic research programs, such as those in cytology, biophysics, virology, immunology, and genetics which are needed in close proximity to the clinical research efforts across the street. Considerable numbers of research animals are needed in these investigations, and particular care was taken to provide superior housing for these creatures. With the completion of this fine new facility in April 1965, it has been possible for the administration of the Memorial Sloan-Kettering Cancer Center to undertake a long needed and sorely delayed renovation of the original quarters which were first occupied in 1939. Once this has been done this institution will have research facilities second to none in its selected field.

Albert Einstein Medical Center, Philadelphia, Pa.

This medical center has evolved from the amalgamation of several hospitals in this city. By 1958 the growth of research activities had reached the stage where the need for new facilities was quite apparent.

An initial award of \$300,359 provided the impetus for their phase I facility. As this building was under construction the hospital administration appointed a research director who promptly gathered around him a very talented staff of young research workers. As a consequence, the first unit of the Korman Research Building was scarcely finished before the need for its expansion was apparent. Consequently, in 1963 an additional award of \$610,128 was provided so that the phase II structure could be added to the existing one. This expansion now has been completed and the research efforts have been expanded. An award of \$264,250 was made in 1965 so that a central animal facility could be constructed to consolidate and upgrade the animal quarters which are an integral part of the research effort of this active group. This award will allow the institution to provide 11,700 net square feet of health-related research-animal space to replace the present old, substandard, scattered spaces presently in use as animal quarters. From an annual operating base of \$300,000 in 1957, the program has risen to \$2,500,000 in 1965. The main areas of investigation include those of the viral etiology of human cancer, cystic fibrosis, immune response in the aged, improvements in artificial heart valves, and experiments leading toward a prosthetic heart. Since the major research developments at this institution have occurred during the past decade, one can predict that needs for additional facilities will develop during the next 10 years.

Medical Center, University of Alabama, Birmingham

In 1946 the research efforts at this institution were minimal, being funded at an annual rate of \$10,000. Even by 1956 the research program still was a modest one by present standards; it was conducted within the confines of the original physical plant at an annual rate of only \$400,000. Within the next decade, however, tremendous strides were made and by 1965 the research base stood at \$6,000,000 per annum. A research effort of this magnitude would have been impossible without provision for adequate facilities.

The initial research facility was started in 1957 when a construction grant of \$1,192,154 was awarded toward construction costs of research areas in an eight-story structure. A unique feature of this building is that it spans a city street and hence forms a functioning connecting link between various areas of the medical center. With the rapid expansion of research support, and the employment of additional staff, it became evident that this initial effort would not be sufficient to meet the needs of the institution for biomedical research. Consequently, in 1965 an additional \$572,800 was awarded toward the costs of a second building, 45,000 square feet in area, which currently is under construction. The research program, which actually has expanded in advance of the facilities which have been provided, includes important investigations in the areas of endocrine and metabolic disorders, cytogenetics, chronic renal failure, the rheumatic diseases, and salivary gland biochemistry and physiology. An active biomedical computer center plays an important part in these studies and current plans include a substantial expansion of these computer-based activities. In short, the predominant position of this institution in the Southeast with respect to investigations in biomedical research would not have been possible without these additional facilities.

Medical Center, University of Arkansas, Little Rock

This medical center, which is an important factor in medical research and education in the Southwest, had moved into new quarters in 1956 which were designed several years earlier chiefly for teaching purposes and basic science research. In the meantime the staff had taken on a number of clinical research responsibilities in these limited quarters and was operating a solid overall research program on a budget of \$375,000. There was a critical need for additional research space, which was provided by an initial award of \$1,066,000 toward construction costs of \$2,186,335 for a new research building. Completion of this facility provided research space for the clinical departments of the medical school while at the same time permitting limited expansion and realinement of basic research areas. The facility has, been of particular value to the departments of medicine, pediatrics, and psychiatry whose research programs in the areas of pulmonary emphysema and edema, circulation problems, acute leukemia, maternal-fetal relationships in the human placenta, and on the psychophysiology of conditioning and extinction have been of especial interest. The ancillary research facilities provided in this building also strongly support the work of the general clinical research center at this medical school. Current research support is at a level of \$1,900,000 per annum and it is anticipated that needs for additional research facilities will be presented to the research facilities program within the next year or two.

University of Chicago, Chicago, Ill.

This institution has had a record of distinguished medical research for a number of years. Although several major additions had been made to the physical plant, including the Argonne Cancer Research Hospital, the pressures for research space in which to carry out important clinical investigations continued to mount during this past decade. In 1960 the university administration took a bold step toward the solution of these space problems by obtaining an award of \$1,127,993 toward the construction costs of the Armour Clinical Research Building. This splendid new facility, built at a cost of \$3 million, provides a 20-percent increase in the clinical research areas of the university. It provides some 51 additional research laboratories for investigations on blood cells and their abnormalities, on glaucoma and other ophthalmic conditions, on disorders in speech and hearing, on improvements in oral surgery, and on fundamental studies in tooth decay. Space also is provided for studies in neurosurgery and chest and abdominal surgery. A radiation therapy laboratory, which connects with the adjacent Argonne Hospital, is also a part of this structure. The Armour Clinical Research Building is but one of several structures at this institution whose construction has been assisted through this program.

University of Minnesota, Minneapolis.

Animal experimentation is essential to the conduct of biomedical research. Although the university had had rather extensive animal facilities for some years in support of outstanding research programs in heart surgery and development of the artificial lung, the volume of clinical investigations had reached a point in 1957 where it became evident that expansion of these essential facilities was needed. De-

cision was made to expand these areas underground, in well lighted and adequately ventilated quarters. In addition, initial research space for the rapidly expanding programs in ophthalmology also was essential and decision was reached to construct these facilities as a single unit. The research construction award of \$893,939 was combined with outside donations to the medical school to construct and equip this multipurpose research building at a total cost of \$1,884,189. Upon completion, space was provided for investigations in bacteriology, pediatrics, psychiatry, neurology, otolaryngology, and ophthalmology. All areas currently are in active use. For the first time in its history the university has been able to carry out a fundamental program in ophthalmologic research.

University of Southern California, Los Angeles

This institution has had a distinguished record of health research, both on its medical campus and in the liberal arts college and graduate school area. In 1961-63 a total of \$1,060,650 was provided from title VII A funds toward the total cost of \$2,366,101 for the health-related research areas in the new five-story Ahmanson Center for Biological Research. This center provides an interdisciplinary setting in which research workers from the departments of bacteriology, biochemistry, biology, chemistry, pharmacy, and psychology are brought together for a broad-based attack on health problems. The resultant interactions provide an unusual opportunity for the exchange of ideas on a scale not hitherto possible. With ample space and modern equipment the number of faculty and research personnel have increased and the precision with which research projects can be investigated has been greatly refined. Current studies range from the biosynthesis of collagen precursors through an investigation of potentiating effects upon psychotherapeutic agents to a project on the evaporative water losses of terrestrial vertebrates. With completion of this facility the university has been able to initiate a department of the vivaria. Each of these research undertakings are health related with respect to man and each will provide knowledge of value in furthering our understanding of disease in man and developing the means for the protection and advancement of his health.

University of Washington, Seattle

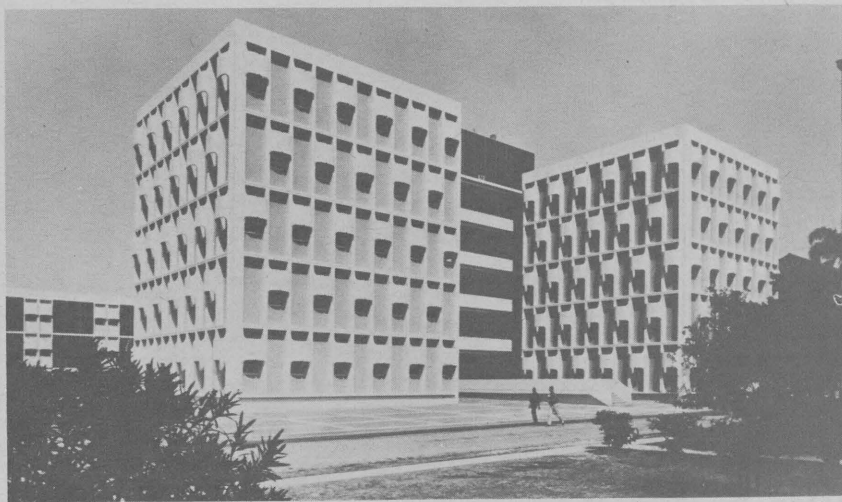
This, the last of the representative facilities to be described in this report, is a multipurpose structure which contains research laboratories for studies in biochemistry and genetics. Completed during this past year at a total cost of \$5.3 million, this building provides over 69,000 net square feet of research space. Construction was aided by title VII A funds in an amount of \$2,484,320. The biochemistry research programs serve all of the university and through that institution, they serve the State and the Nation. Principal emphasis is on studies in physical biochemistry and protein structure, enzyme chemistry and mechanisms of enzyme action, lipid biochemistry and studies on cell membranes, nucleic acid investigations and their relation to virus structure, and the development of ultramicro analytical methods for use in clinical biochemistry investigations. The genetics department, although only established in 1959, already has acquired renown for its research programs. The chief areas of interest are in

studies of the recombination mechanisms in microorganisms, the physiology of DNA replication in phage-bacterial systems, the genetic control of galactose utilization, the transplantation of bone marrow, the genetic control of drug idiosyncrasy, and the transfer of genetic information. With completion of this building it has been possible for the first time to bring research workers in medical genetics and in classical genetics together at this institution, as well as to provide them with the stimulus of interaction with a very active biochemistry department.

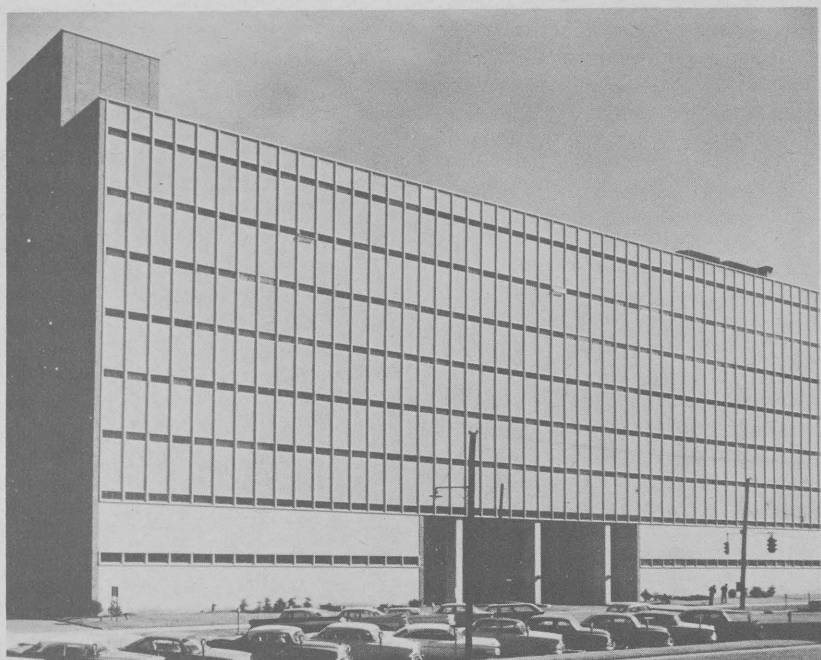
This completes the brief descriptions of typical facilities provided through this program during the past 10 years. In making the presentation an attempt has been made to show a broad spectrum of the program, both from the geographical standpoint and the research program viewpoint. Photographs depicting the health research facilities program are presented below.



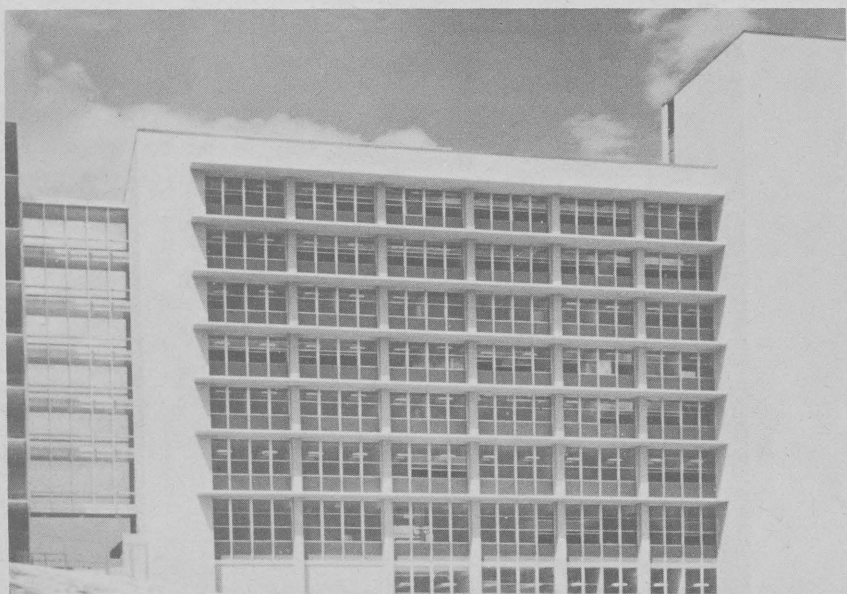
University of Vermont, Burlington, Vt. HRF construction consists of building near lower right and building under construction in right corner.



Ahmanson Center for Biological Research, University of Southern California,
Los Angeles, Calif.



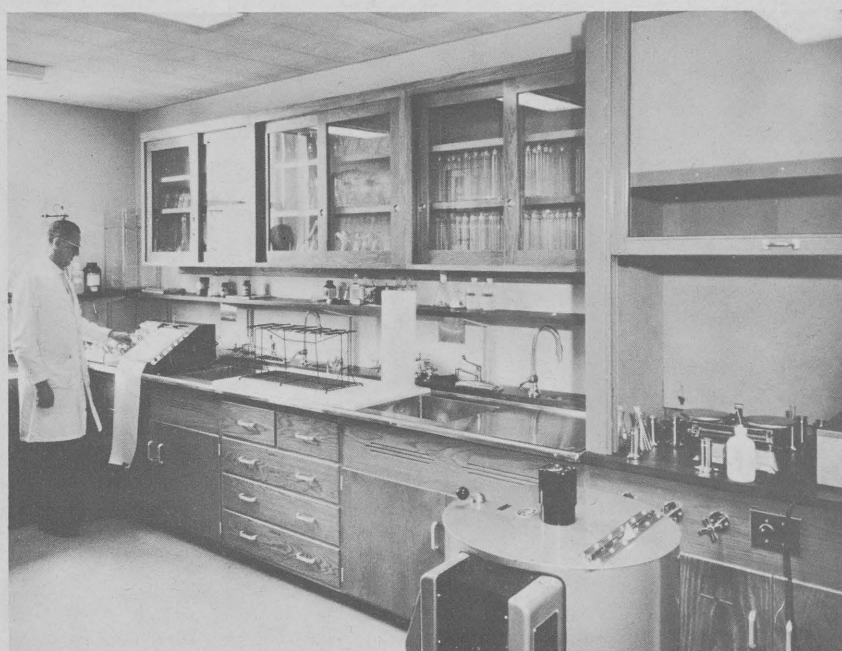
University of Alabama Medical Center, Birmingham, Ala.



University of Arkansas Medical Center, Little Rock, Ark.



Neustadt Research Laboratories, National Jewish Hospitals,
Denver, Colo.



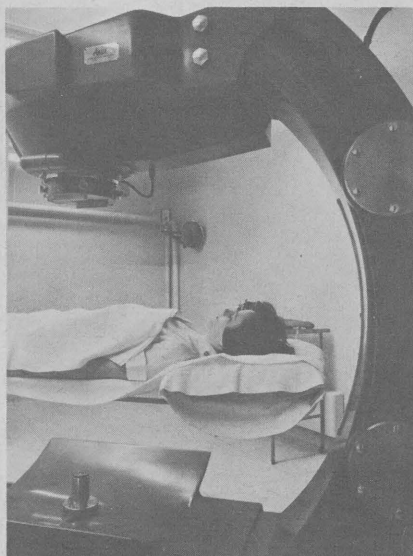
Emory University, Atlanta, Ga.



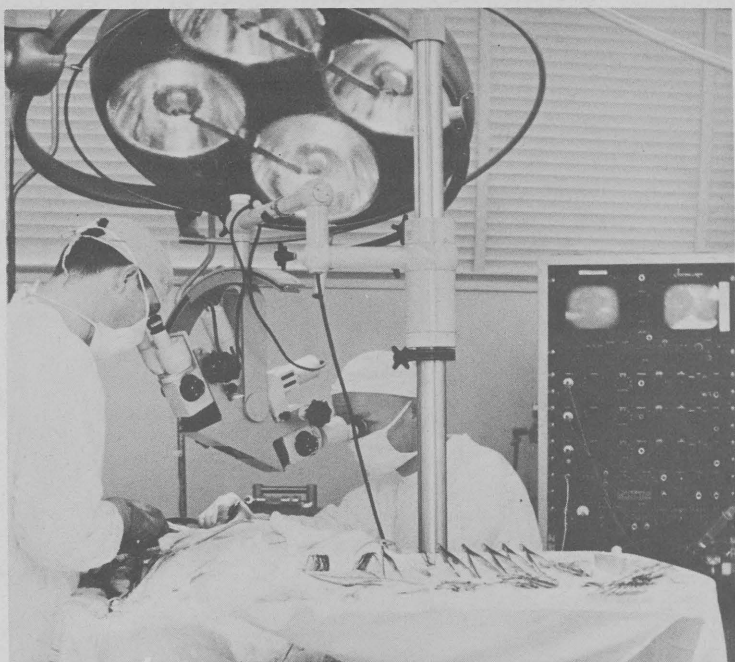
Laboratories in Botany and Microbiology Building, University of Oklahoma,
Norman, Okla.



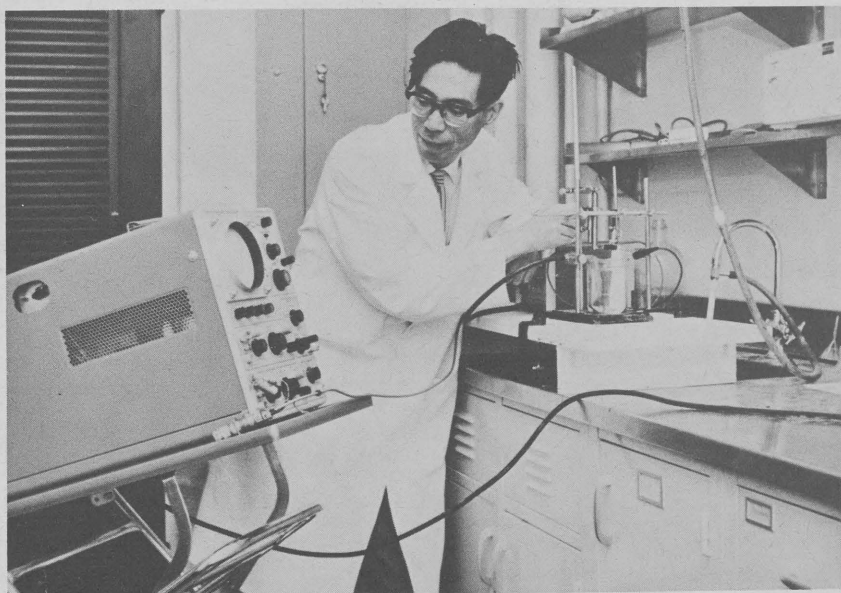
Palo Alto Medical Research Foundation,
Palo Alto, Calif.



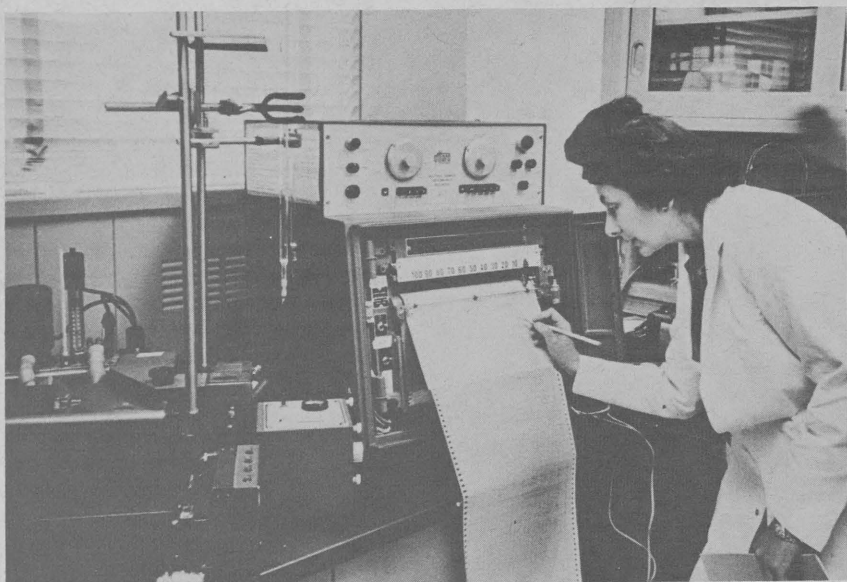
Radiation Therapy Facility, Ohio State
University, Columbus, Ohio.



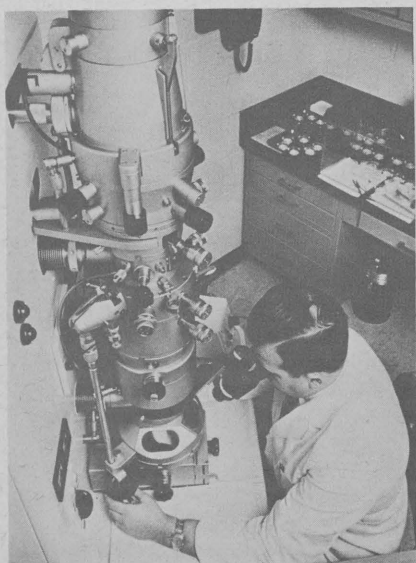
University of Vermont College of Medicine, Burlington, Vt.



University of Vermont College of Medicine, Burlington, Vt.



Memorial Sloan-Kettering Cancer Center, New York, N.Y.



Electron Microscopy, Memorial Sloan-Kettering Cancer Center, New York, N.Y.



Emory University, Atlanta, Ga.



Life Science Center, Arizona State University, Tempe, Ariz.



J. Walter Wilson Biology Laboratory, Brown University, Providence, R.I.

C. AREAS OF RESEARCH

As was evident from the capsule descriptions just presented, research in the facilities constructed under this program has encompassed every area of biomedical interest known at this time. Some have been designed for the exploration of fundamental concepts in biology, chemistry and physics—for the seeking out of the innermost secrets of nature so that the result may be ultimately applied to the conquest of disease. Others have been planned for controlled clinical investigations in order that newest tools in the medical armamentarium can be safely and quickly evaluated against disease as it is known in the human body. Still others have been engineered for the conduct of necessary animal experimentation under the most modern and humane conditions. In all instances very careful thought has been given to the architectural and engineering problems to which satisfactory solutions must be found if the resultant research facility is to be completely satisfactory for the proposed research program.

In appendix VI there has been provided data on the dollar levels of construction support given to various professional disciplines during the initial 10 years of this program.

D. TYPES OF RESEARCH FACILITIES CONSTRUCTED

The general level of sophistication of current biomedical research is such that, while there is considerable need for research laboratories of the traditional type, there also is a coexistent requirement for supportive facilities with quite unique requirements. Amongst these latter are the need for isolation systems for work with organisms of a highly infectious nature such as viruses and other pathogens, requirements for "hot" laboratories for work with radioactive materials, and needs for environmental control rooms in which a wide range of temperature and humidity conditions can be simulated and maintained.

On the clinical side, for direct work with patients, there is need for hyperbaric chambers in which studies on illnesses such as gangrene, carbon monoxide poisoning, organ transplantation, heart disease, and cancer can be conducted. Such chambers have been provided in a number of institutions where the sponsoring scientific faculty has demonstrated their familiarity with the highly specialized skills needed to make the most effective use of these new devices.

In other instances the need has been for the more traditional type of clinical investigational units, in which carefully planned experiments can be carried out through the cooperation of human patients. Clinical research centers of this type create a cohesive force for clinical investigations of an integrated, interdisciplinary nature while at the same time providing a model of excellence for clinical research within the institution. In such a setting it is possible for basic scientists to participate to a maximum in clinical investigations by sharing their unique knowledge with clinical scientists from many disciplines.

In recent months the research needs of the new and expanding medical schools have occupied a predominant role in the facilities program, and it is clearly evident that this trend will continue during the next fiscal year. It is truly axiomatic that good medical teaching is equally dependent upon excellent facilities for clinical service and superb facilities for the conduct of research. These latter are being

provided on a 50-percent matching basis through awards under the health research facilities program.

E. GEOGRAPHICAL DISTRIBUTION

Since the inception of this program, consultants, members of the Scientific Review Committee and of the National Advisory Council on Health Research Facilities, and the Division's staff have been aware of, and alert to, the requirement of section 705(e) of the Public Health Service Act that consideration be given to providing an equitable geographical distribution of research facilities. Within the limits imposed by voluntary receipt of applications from institutions, together with concerted efforts of staff, this requirement has been met. Applications have been received from, and grants have been awarded in, all 50 States, the District of Columbia, and the Commonwealth of Puerto Rico. An analysis of this distribution has been given in appendix V, with the data being presented on a State-by-State and a regional basis. In this connection it should be pointed out that strenuous program efforts have been made to encourage receipt of applications from areas having relatively less health-related research but which are believed to possess considerable potential for future growth. Furthermore, while certain areas have received less program funds than have other regions, institutional approval rates in these areas were higher than average and awards made represented a higher percentage of the requested funds.

F. CURRENT STATUS OF PROJECTS

A brief financial profile of the program to date is presented in the accompanying table 1. Although in some instances the awards shown there represent facilities which were constructed solely for research, in many instances the research laboratory space which is supported is but one portion of a large, multipurpose facility designed to meet the several needs of the applicant institution. Taken collectively, the buildings housing research facilities constructed under this program represent an investment of almost \$1.9 billion.

TABLE 1.—*Financial profile of the health research facilities program, 1956-65*

Item	Number	Amount	Average
Applications received.....	1, 756	\$646, 344, 984	\$368, 070
Applications pending Council review.....	56	38, 833, 414	693, 543
Applications acted on by Council.....	1, 700	607, 506, 570	357, 357
Applications disapproved, including disapproved portions of approved applications.....	328	198, 829, 173	
Approved, but unfunded applications (backlog).....	42	47, 257, 673	1, 125, 183
Applications awarded.....	¹ 1, 330	² 361, 419, 724	271, 744
Number of institutions awarded.....	403	361, 419, 724	896, 823
Projects awarded, construction not yet started.....	99	70, 371, 990	710, 828
Projects awarded, construction in process.....	186	107, 429, 477	577, 578
Projects completed.....	760	183, 618, 257	241, 603
Total, projects awarded.....	¹ 1, 045	361, 419, 724	345, 856

¹ A single construction project frequently consists of the basic award and a supplemental award for movable equipment when the project is nearing completion. This results in a larger aggregate number of awards (1,330) in comparison to the actual number of construction projects (1,045).

² The balance of \$18,580,276 will be available for award between Jan. 1 and June 30, 1966.

Since the inception of the program the approval rate of applications has been 81 percent of applications received and 67 percent of funds requested. Awards have not been made for all approved applications, however, due to insufficient appropriated funds. During the 10-year span of the program many applications approved for several millions of dollars have been administratively disapproved and not funded due to lack of program funds. As of December 31, 1965, the number of approved, but unfunded applications totaled 42 and represented \$47.3 million.

This program has been looked upon as a primary source of construction funds for those health research facilities which are required by medical and other schools of the health professions. As a consequence a very high percentage of the funds awarded have gone to such institutions as shown in table 2. In addition, a number of other types of institutions—such as universities, nonprofit research institutes, hospitals, and State and local health departments—also heavily engaged in health research, have relied upon these funds for critically needed facilities.

TABLE 2.—*Types of institutions receiving health research facilities awards, 1956–65*

Type	Number of projects ¹	Awarded	Percent	Average
Medical schools	294	\$185,863,404	51.4	\$632,188
Dental schools	28	8,093,302	2.3	289,047
Schools of public health	11	8,204,747	2.3	745,886
Schools of pharmacy	23	3,657,617	1.0	159,027
Other schools ²	373	79,245,821	21.9	212,455
Other institutions ³	316	76,354,833	21.1	241,629
Total	1,045	361,419,724	100.0	345,856

¹ Distribution has been adjusted by 8 projects, covering multiple schools of medicine, dentistry, pharmacy, and public health, in order to avoid dual reporting.

² Primarily university based sciences.

³ Primarily hospitals and research institutes.

Since a good proportion of the schools of the health professions are privately owned, it is quite understandable that the distribution of funds among public and private institutions has shown the following percentage: public, 45 percent; private, 55 percent. This trend has tended to remain steady during the past several years but it is expected to increase on the public side during the next several years since the majority of new medical schools are being constructed with public funds and are under public control.

It is one of the characteristics of a construction program that completed facilities lag funds for their construction by a period of 18 to 24 months. In other words, an institution must assemble the funding for the building, commit the structure to contract, and then wait for an extended period before the urgently needed facilities can be put to effective use. Since the larger and more complex facilities take longer to construct, the leadtime tends to increase as the program becomes increasingly involved with facilities of the latter type. Available data, as presented in appendixes I and IV on projects awarded and completed, respectively, tend to bear out these statements. Thus, while 760 out of 1,045 projects awarded have been completed (73 percent), on a dollar basis only 51 percent of the dollars granted are

reflected in projects completed and in use. The remaining funds granted are represented by projects which currently are in varying stages of advance planning or actually under construction.

G. TRENDS

The most noticeable trend in this program during the past 10 years has been the shift toward support of large-scale, institutionwide facilities. Although originally presented as the first broad-gaged National Institutes of Health program designed to improve and expand the physical environment in which multicategorical research programs could be conducted, during the initial period the grants awarded (with a few notable exceptions) tended to be on a considerably smaller scale than during the most recent years and frequently represented departmental needs rather than institutional ones. In subsequent years, however, the program progressively moved away from this initial phase and has increasingly been concerned with an institutional concept. In the majority of instances this has resulted in the support of research facilities which are to be used for the research programs either of an entire institution or its major biomedical departments. This trend has been influenced strongly by the fact that, in recent years, many universities have tended to abandon their prior efforts of haphazard expansion in favor of building plans which are based on a careful projection of the facilities needs over periods of 10 to 20 years. When properly guided this type of planning can foster substantial economies in both initial and operating costs for research facilities. As an example, a single large building designed to house a number of individuals representing many departments and disciplines can reflect substantial savings in the costs of utilities, common use areas, stairways, and elevators. After construction the economies of a centralized maintenance are realized. In this manner the ideal of a specific health research facility designed around scientific programs which serve the varying needs and interests of many scientists can be effected.

A corollary of this trend has been the substantial increase in the size of the average grant which has risen steadily except for the initial year. As was mentioned previously, a few quite large awards were made initially in order to meet a pent-up demand for institutional facilities. This rise is shown in table 3 below:

TABLE 3.—Number, amount, and average size of award, by fiscal year, 1957–66

Fiscal year	Number of awards	Amount awarded	Average award
1957.....	106	\$28,062,026	\$264,736
1958.....	174	29,125,575	167,388
1959.....	199	29,658,283	149,037
1960.....	158	28,910,166	182,976
1961.....	138	31,204,051	226,116
1962.....	97	30,732,149	316,826
1963.....	172	47,221,576	274,544
1964.....	122	53,239,426	436,389
1965.....	115	50,553,804	439,598
1966 (through Dec. 31, 1965).....	49	32,712,668	667,605
Total.....	1,330	361,419,724	271,744

Part of this increase is due to escalations in both construction and equipment costs; the total of such increments has exceeded 30 percent during this period.

As mentioned previously, a definite lag exists between the time that funds are committed toward construction and the date that the desired facilities can be placed into service. With the shift toward larger, more complex types of facilities there has been an accompanying extension of this lag period. Thus one can make the following observations: (a) As one might expect, few facilities were completed and put into use during the initial years of the program; (b) by the end of the third calendar year the number of projects completed each year had reached a nearly steady state; and (c) the number of projects under construction in any given calendar year also had reached a stable figure of about 300. This latter figure reflects both the increased complexity of construction as well as the extended construction time involved in the larger projects currently supported. These trends are illustrated in table 4:

TABLE 4.—Completion of health research facilities showing leadtime between award and completion, by calendar year

Calendar year	Projects awarded	Cumulative awards	Projects completed	Cumulative completions	Under construction
1956 ¹	72	72	0	0	72
1957.....	120	192	12	12	180
1958.....	151	343	59	71	272
1959.....	125	468	93	164	304
1960.....	108	576	114	278	298
1961.....	95	671	94	372	299
1962.....	133	809	120	492	317
1963.....	91	900	112	604	296
1964.....	88	988	105	709	279
1965.....	57	1,045	² 51	760	285

¹ 5 program months.

² Based on incomplete reporting. Many notices of completions in calendar year 1965 will not be forwarded until 1966.

Another aspect of this picture is a trend toward a rise in average construction costs. This rise reflects not only the incremental cost escalations mentioned above but also incorporates those cost increases which are due to the demand for more sophisticated types of facilities which are essential if modern biomedical problems are to be attacked and solved in a meaningful way. It is illustrated by the fact that, whereas the average cost per net square foot for all projects awarded during the 10-year period is approximately \$53, the average for projects awarded during the past year is about \$60 per net square foot.

H. PROGRAM DEVELOPMENTS

1. *Appropriation history of the health research facilities program.*—Since the health research facilities legislative authority has always been for a limited period of time, four extensions have occurred since its inception, the most recent in August 1965.

Title VII, part A, of the Public Health Service Act, under which this program operates, contained an original authorization of \$30 million annually for 3 years beginning July 30, 1956. In August 1958 the authorization was extended for 3 more years at \$30 million, and in October 1961 it was extended for a 1-year period with an

increased authorization to \$50 million. At the same time the law was changed so as to broaden the term "research facilities" to include research and related purposes, including research training. In October 1962 the authorization was again extended for 3 additional years, through June 30, 1966, at \$50 million a year.

The fourth extension was signed into law on August 9, 1965, by President Johnson in an outdoor ceremony before 2,000 persons in front of the NIH Clinical Center. This latest provision extends the program through June 30, 1969, and authorizes up to \$280 million over that period. This ceremony was attended by many Members of the Congress, including Senator Lister Hill, of Alabama; Representative



John E. Fogarty, of Rhode Island; Representative Oren Harris, of Arkansas; the then Surgeon General of the Public Health Service, Dr. Luther L. Terry; outgoing and incoming Secretaries of the Department of Health, Education, and Welfare, Mr. Anthony J. Celebrezze and Dr. John W. Gardner; Dr. James A. Shannon, NIH Director; Dr. Thomas J. Kennedy, Jr., Chief of the Division of Research Facilities and Resources, and many other Government leaders; also, representatives of several universities and health and scientific organizations, as well as a large number of foreign diplomats and employees of the National Institutes of Health.

2. *Legislative developments.*—A development of major consequence was passage of the Health Professions Educational Assistance Act of 1963 (Public Law 88-129) which provides authorization for grants to schools of the health professions for the construction of teaching facilities. Although that program is operated by the Division of Hospital and Medical Facilities of the Bureau of States Services it is, of necessity, closely linked with the research facilities program since many institutions have planned to construct their teaching and research facilities simultaneously, frequently within the confines of a single building. In order to assist such institutions and to provide

as much coordination as possible a joint application form was developed on which requests for facilities support can be filed. Recently this form has been expanded so that it now covers applications for five distinct construction programs; it is received at a single point within the Public Health Service, namely in the Division of Research Grants of the National Institutes of Health. The coordination extends to joint participation in project site visits, and frequent consultations on matters of mutual concern. Through this mechanism it has been possible to provide for the simultaneous award of grants for both teaching and research facilities to a given institution. It is estimated that a considerable portion of the facilities to be supported in fiscal 1967 will represent situations of this type.

3. *NIH emphasis on broad institutional support.*—With the establishment in 1962 of the Division of Research Facilities and Resources within the National Institutes of Health as a focal point for the administration and management of broad programs which are intended to supply a wide institutional base of support for health-related research there came a change in emphasis in the health research facilities program. It now became essential to support large multidisciplinary research facilities which would serve as broad-based health research resources for the applicant institution. Thus there developed a necessity for close cooperation with grantee institutions so as to effect a proper administration of these large construction grants but there was a further requirement of coordination with other components of the Public Health Service to insure the development of those facilities most suitable for implementing defined research goals of the Service. In a broad sense, therefore, facility awards are made only when there is evidence that the proposed facility will be used effectively for health-related research of particular concern to one or more operating segments of the Public Health Service. To this purpose, Health Research Facilities staff members have spent much time and effort consulting with officials and scientists of applicant institutions as well as with extramural program staff of the several National Institutes of Health Institutes, and of the various Divisions of the Bureau of State Services. The awards made this past year reflect this collaboration even though the results will not be generally evident, even to workers in the health sciences, for some years after the facilities have been in use.

4. *Administrative developments.*—As was reported last year, three major administrative developments which relate to the activities of the health research facilities program have been effected by the Division:

(a) Foremost has been the establishment of the Scientific Review Committee. In the early stages of the health research facilities program, the comparatively limited nature of most of the applications permitted effective review and deliberation by the National Advisory Council on Health Research Facilities. The increased cost and complexity of construction and specialization in biomedical research, however, ultimately placed an inordinate burden on the time and resources of the Council members in making numerous project site visits and in undertaking scientific evaluation of the research programs to be conducted in the proposed facilities. To maintain the high standards of review and to alleviate the demands placed upon members of the Council, the Scientific Review Committee was established during the spring of 1964.

The function of that committee in broad terms is similar to that of the traditional study sections of the National Institutes of Health. Specifically, the committee is composed of expert scientists from varied disciplines who perform the initial review of applications, participate in site visits, and meet as a committee to deliberate on the strengths and scientific merits of the applications and to make recommendations to the Council. Keystone to the review process is the project site visit made by a committee of scientific experts qualified in the major specific areas of research. The purpose of this visit is to evaluate the health research capabilities of the institution and the need for the requested facility, the scientific merit of the research to be carried out in it, and the feasibility of the proposed structure for the research programs to be conducted in it. Evaluation of the scientific merit involves a consideration of present and anticipated grants and other funds that would support the research programs while taking into account the knowledge that future support frequently is contingent upon improved facilities and additional space to accommodate expanded staffs.

(b) A second administrative development was the establishment of the Office of Architecture and Engineering in the Division of Research Facilities and Resources in 1963. The need for such an Office mounted as the facilities supported by the program became large-scale in scope and more and more complex. The design of modern research laboratories is a new architectural and engineering specialty, one in which the scientist and the architect are only beginning to work constructively together and to understand each other's problems. Modern electronic equipment alone has had a tremendous influence on laboratory design. Staff architects and engineers review all construction plans submitted with applications and work with the institutions through the planning and construction phases. This type of guidance assures the National Advisory Council on Health Research Facilities that the proposed laboratory is structurally sound and adaptable to future program needs. At the same time, it facilitates proper stewardship of the funds invested for biomedical research by insuring the maximal return in the form of usable laboratory space for each dollar invested by the Federal Government as well as by the grantee institution. As a result of these efforts, the Architecture and Engineering Office has recovered through careful evaluation of projects more than \$2 million for reprogramming since its establishment less than 3 years ago while at the same time the usefulness of the proposed facilities have been improved. Such reprogrammed funds have permitted the award of eight additional projects which otherwise could not have been made within the appropriated funds. A greater benefit has been the assurance that the buildings have been properly designed and will be adequately funded.

(c) A third administrative development has been the reorganization of the Health Research Facilities Branch in 1964 with a view to increasing the effectiveness of the program. In essence, the operations of the branch were subdivided into three distinct, but related, functions: scientific review, grants management, and program analysis and evaluation.

The scientific review section functions as a scientific staff to the Scientific Review Committee and to the National Advisory Council on Health Research Facilities in coordinating and participating in

project site visits, deliberations, reports, meetings and the review of the applications. The scientific review section also works closely with the Architecture and Engineering Office, and with other offices and agencies such as the National Institute of Child Health and Human Development concerning applications for mental retardation; the Division of Hospital and Medical Facilities of the Bureau of State Services concerning joint projects with professional educational facilities; and the National Science Foundation and other agencies where a close connection exists between title VII A applications and construction requests to one of those agencies.

The grants management section is responsible for the initial work in processing an application as well as for the procedures attendant upon the award of an application, letting of the contract, payments to the grantee, and financial reports from the grantees, through the acceptance and audit stages of the grant. Improved control over the various phases of construction and fiscal management are an important objective of the section.

The program analysis and evaluation section evaluates the impact of individual grants upon scientists and institutions as well as the effect of the total program. A comprehensive data capture system and a program of biennial reports from the grantees is under development. Once the data capture and reporting programs have been established, it is expected that substantial, valuable qualitative and quantitative data will be gathered, analyzed, and evaluated. Definitive data on program accomplishments, their impact on the total scientific research community, and a thorough assessment of met and unmet needs will become available. These findings will be reported to the Scientific Review Committee and the National Advisory Council on Health Research Facilities and will provide enhanced program management tools for the Director of the National Institutes of Health and the Surgeon General.

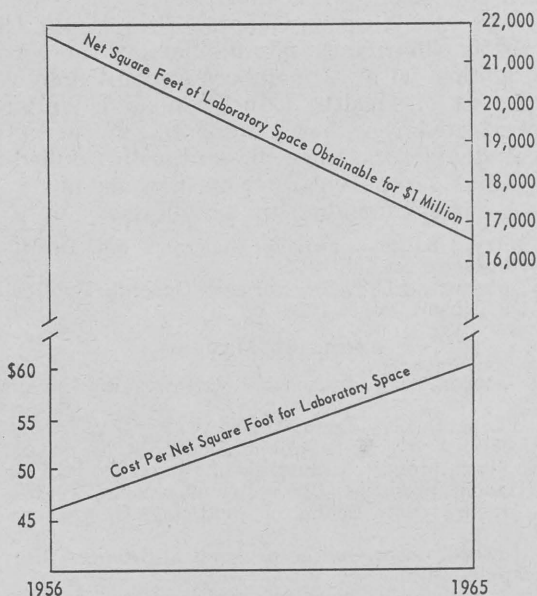
I. PROBLEMS DURING PAST DECADE, 1956-65

The inability of the health research facilities program to finance, within the appropriated funds, all of the meritorious applications that have been recommended for approval by the Advisory Council, has been the major problem encountered in the past decade. From the very outset, the program has operated with a backlog of requests for more funds than were available. As the program has continued, not only has the amount requested exceeded the amount authorized, but there has been a steady increase in applications recommended by the Council for awards, but for which there were no funds. In order to bring the backlog within manageable limits, to avoid dissipation of staff effort on applications which stood little likelihood of being awarded, and to reduce the architectural and engineering workload on previously approved applications which had since become outmoded in design, it was found necessary to administratively deactivate several dozen projects, which had remained unfunded for 2 years or longer. As a result of such rigorous efforts, on December 31, 1965, there existed a backlog of 42 applications representing a Council-approved level of \$47.3 million. It is anticipated, however, that the \$280 million authorization level over the next 3 years (fiscal year 1967-69), if realized in eventual appropriations, should not only prove sufficient to

finance applications approved by Council during that period, but may well prove adequate to reduce significantly the backlog.

Another serious problem has been the more than 30-percent rise in costs of constructing and equipping health research laboratories over the past 10 years which has been a significant deterrent to an attempt to fund all meritorious applications (see chart). As a result, it now requires about \$40 million to purchase the same amount of construction and equipment that was purchased for \$30 million during the year the program began. In effect, approximately half of the \$20 million increase (from the original \$30 million appropriation level to the current \$50 million level) must go for increased construction cost, thus dissipating by almost 50 percent even so significant an appropriation increase as \$20 million per annum.

EFFECT OF COST INCREASES FOR CONSTRUCTION UNDER
THE HEALTH RESEARCH FACILITIES PROGRAM
1956 - 1965



The difficulties encountered by many public and private nonprofit institutions in mustering their 50-percent share of construction funds has caused many a meritorious health research facilities project to remain as a concept on an architect's drafting board and a dream in a trustee's mind. This problem is becoming more acute as institutions' pent-up needs for various types of construction, such as educational, health professions, mental retardation, etc., have been facilitated in the past few years by diverse Federal grants-in-aid legislation. The limited resources of the institutions, and the vast construction requirements of all types, have placed an unusual premium on each institution's matching dollar. This premium is further accentuated by the varying percentages of matching requirements of the several Federal

programs. For example, a program that requires an institution to match only 25 percent of the construction cost finds it "twice" as difficult to raise 50 percent of the matching costs under the health research facilities program. In essence, an institution's matching capability of \$100,000 under a 25-percent matching grant will purchase twice as much square feet of construction as that authorized under the 50-percent matching health research facilities program. With the increasing acuteness of this problem there arises increased pressure to lower the current 50-percent matching requirement so as to assure adequate and continued construction of research facilities essential for graduate education in the medical and the biomedical sciences.

III. NATIONAL ADVISORY COUNCIL ON HEALTH RESEARCH FACILITIES—ITS ACTIONS IN 1965

A. THE COUNCIL

This Advisory Council, as authorized by law, consists of two ex officio members—the Surgeon General of the Public Health Service (who also serves as Chairman) and an official of the National Science Foundation, together with 12 members appointed by the Secretary of the Department of Health, Education, and Welfare. Of these latter, four are selected from the general public and eight from amongst leading medical, dental, and scientific authorities skilled in the health sciences. Members serve 4-year terms; new members appointed in 1965 provided a current membership as follows:

- Dr. Luther L. Terry, Chairman, Surgeon General, Public Health Service, Washington, D.C. (through Sept. 30, 1965).
- Dr. William H. Stewart, Chairman, Surgeon General, Public Health Service, Washington, D.C. (from Oct. 1, 1965).

APPOINTED MEMBERS

- Dr. John A. D. Cooper, dean of sciences, Northwestern University, Evanston, Ill.
- Mrs. Edward J. Fitzgerald, Needham, Mass.
- Mr. Ralph C. Glock, vice president, Bank of New York, New York, N.Y.
- Dr. David R. Goddard, provost, University of Pennsylvania, Philadelphia, Pa.
- Dr. Richard A. Harvill, president, University of Arizona, Tucson, Ariz.
- Dr. Maurice J. Hickey, dean, School of Dentistry, University of Washington, Seattle, Wash.
- Dr. Robert B. Howard, dean, College of Medical Sciences, University of Minnesota, Minneapolis, Minn.
- Dr. L. Meyer Jones, director of scientific activities, American Veterinary Medical Association, Chicago, Ill.
- Hon. Stephen L. R. McNichols, Hilton Office Building, Denver, Colo.
- Dr. Stanley W. Olson, dean, College of Medicine, Baylor University, Texas Medical Center, Houston, Tex.
- Mr. Hamilton S. Putnam, president, Putnam Associates, Concord, N.H.
- Dr. Vernon E. Wilson, dean, School of Medicine, University of Missouri, Columbia, Mo.

EX OFFICIO MEMBERS

- Dr. Howard E. Page, Director, Division of Institutional Programs, National Science Foundation, Washington, D.C.
- (Alternate: Dr. Harve Carlson, Director, Division of Biological and Medical Sciences, National Science Foundation, Washington, D.C.)

B. COUNCIL ACTIONS IN 1965

The Council continued to fulfill its statutory responsibilities in connection with the review and evaluation of construction grant applications under title VII A of the Public Health Service Act. A total of 123 applications, requesting \$114,247,165 were considered during the three meetings in 1965. The Council was aided in these considerations by written recommendations of the Scientific Review Committee, by critical on-site evaluations made by consultants to the program, and by technical and scientific advice from the Division staff. Following intensive, individual discussion and appraisal of each application the Council took formal action on each request. Favorably recommended projects totaled \$68,825,358 which was \$18,825,358 in excess of the \$50 million annual appropriation level. At the year's end, a current backlog of 42 favorably recommended projects, totaling \$47,257,673 remained. Since two additional meetings are scheduled for the remainder of the fiscal year, in April and June, 1966, it is estimated that the list of approved but unpaid projects will have risen to \$70 million by that time.

The present trend toward submission of applications for support of research facilities designed for the conduct of broad, institutionwide, interdisciplinary programs of research has led to a situation in which, while the Council reviewed a smaller number of applications than in previous years, the projects evaluated represented a considerably higher dollar volume. A résumé of Council actions is shown in table 5:

TABLE 5.—*Résumé of title VII A (health research facilities) Council action for calendar year 1965*

Type of action	March	June	December	Total	Percent
Number of applications:					
Reviewed.....	35	35	53	123	100
Recommended.....	23	26	30	79	64
Declined.....	11	7	11	29	24
Deferred.....	1	2	12	15	12
Dollar volume of applications:					
Reviewed.....	\$26,889,352	\$34,101,739	\$53,256,074	\$114,247,165	100
Recommended.....	14,529,035	23,828,156	30,468,173	68,825,358	60
Declined ¹	9,366,739	8,117,309	9,305,084	26,789,132	24
Deferred.....	2,993,578	2,156,280	13,482,817	18,632,675	16

¹ Includes disapproved portions of applications recommended in reduced amount.

C. PRINCIPAL AWARDS AND COMPLETIONS IN 1965

During the calendar year 1965 there were 69 grants awarded for a total of \$42,792,665. Included in these were the following: Five awards for the construction of research facilities at newly established schools of medicine and public health: \$1,252,000 to the University of Arizona, Tucson, medicine; \$1,110,500 to Brown University, Providence, R.I., medicine; \$1,560,000 to the University of California, San Diego, medicine; \$1,152,000 to the University of Hawaii, Honolulu, medicine and public health; and \$3,850,000 to Rutgers, the State University, New Brunswick, N.J., medicine.

Nine awards for expansion of research facilities at existing institutions: \$1,025,100 to the Forsyth Dental Center, Boston, Mass.; \$2,470,600 to Harvard University School of Public Health, Boston, Mass.; \$2,210,900 to the Massachusetts General Hospital, Boston, Mass.; \$2,545,000 to the School of Medicine, University of Michigan, Ann Arbor, Mich.; \$1,443,900 to the University of Pennsylvania School of Dental Medicine, Philadelphia, Pa.; \$1,925,000 to the University of Vermont School of Medicine, Burlington, Vt.; \$1,805,000 to the University of California School of Veterinary Medicine at Davis, Calif.; and \$2,370,000 to the Washington University School of Medicine, St. Louis, Mo.

In this same calendar year some 51 new and remodeled facilities were completed, dedicated, and put into use. These represented a total research facility investment of \$81 million. Although most of these facilities were the object of formal dedication ceremonies during which due attention was given to their urgent need, to their value to health research, and to the Federal and local funds which made their construction possible, almost without exception the truly critical need for these buildings had been emphasized by the fact that they had been placed in use well in advance of the ceremonial christening. A few of these structures are illustrated following the narrative portion of this report.

IV. FUTURE COURSE OF THE HEALTH RESEARCH FACILITIES PROGRAM

A. CONTINUED NEED FOR CONSTRUCTION OF HEALTH RESEARCH FACILITIES

Expenditures for medical research in our Nation increased from \$0.2 billion in 1950 to \$1.9 billion in 1965. Construction of new and modernization of existing research facilities needed to house the scientists conducting this research should precede but most certainly must keep pace with this increase in research productivity. One forecast states that medical research expenditures will rise to \$3 billion by 1970. It is essential that adequate facilities be provided in time to meet those needs.

Although much headway has been made during these past 10 years in an attempt to cope with this problem, nevertheless we recognize that at least 40 percent of all present health research facilities have been in use for 20 years or more. Such buildings lack adequate power and essential utilities required for modern biomedical research programs. In many instances it is not possible to improve these facilities in an economical fashion. Laboratory obsolescence is particularly rapid today due to the extensive use of research techniques developed within the last decade and the rapid, continuous development of even newer techniques. Consequently, it is recognized that modernization and replacement of existing facilities will represent a prime program demand during the coming decade. In planning for this need full consideration will be given to requirements for improved laboratory instrumentation, modern electronic equipment, air conditioning, and adequate facilities services.

Another essential requirement is provision of research facilities in newly established schools of the health professions. While all current needs have been met up to the time of this report, it is recog-

nized that they are at the midpoint of development and that applications from several such institutions are pending at the present time. We are also aware of additional demand for new professional schools which will be submitted during the coming years. Furthermore, as these new institutions, which have been developed in this decade, begin to mature, it is inevitable that their research programs will far exceed the essential research facilities initially provided and thus will begin a second round of requirements.

One other problem facing the Nation is the emergence of smaller institutions as full, independent, well-rounded universities. Such institutions are destined to fulfill a well-recognized need in many areas of our country. To the extent that such developing institutions manifest their intention to engage in comprehensive, meaningful health research programs there will be an obligation to see that their requirements for facilities in which to undertake such investigations are met. In many instances adequate provision of facilities for biomedical research may represent an initial, but highly significant, step in their development toward extensive involvement in health science research.

Still another requirement is the need to increase the capability of the larger, university-affiliated and associated hospitals of our Nation to undertake more sophisticated aspects of health research. Although these program funds have been used for several such developments during the past several years, the need is an increasing one and it is anticipated that many additional hospitals will be involved especially in connection with the development of extensive medical centers in which medical teaching, patient care, and biomedical research constitute the *raison d'être* for their existence.

It is difficult to completely document these requirements at this time. Nevertheless, some statements can be made. Since passage of the Health Professions Education Assistance Act of 1963 there have been 24 awards totaling \$28 million for construction of the research areas in buildings used jointly for teaching and research. Requirements for such participation during the next 3 years clearly are in excess of \$100 million. Another measure can be derived from a study of the list of current applications now pending committee and council review, as given in appendix II. That listing includes 56 applications in which request is made for \$38,838,414. In addition, institutions who intend to submit applications at a later date, as given in appendix III of this report, have outlined needs in excess of \$71 million for 103 projects.

B. PROGRAM BALANCE

The change in program emphasis to one of broad institutional support, as mentioned earlier, coupled with requirements to provide initial research facilities for developing schools of the health professions, has led to a need for careful assessment of program balance during the next several years. If funding continues to be adequate it should not be too difficult to maintain such balance. On the other hand, should circumstances dictate a severe restriction on program funding, then critical decisions will have to be made as to whether it is more essential to meet the pressing requirements of the new professional schools or to provide biomedical facilities required for the conduct of

research essential to the research program goals of operating segments of the Public Health Service. Information basic to the resolution of such programs will have to be obtained through close coordination with program officials concerned with teaching facilities on the one hand and extramural program staff of the Public Health Service on the other. Out of these discussions one can expect to reach a balanced position based on essential needs versus available funds.

C. INSTITUTIONAL FUNDING PROBLEMS

The health research facilities program was established because of knowledge that non-Federal facilities urgently required for the conduct of health sciences research were grossly inadequate and a belief that these conditions could not be rectified without Federal participation in the costs of such construction. A limit of 50 percent was placed upon such participation by the Congress with the understanding that such a limit would provide sufficient incentive for participating institutions to construct the facilities known to be required. Although such has been the case in many instances, ever since the earliest days of the program there have been individual cases in which many public and nonprofit institutions have had a most difficult experience in attempting to secure their portion of the construction funds. This problem has been intensified in the last several years with the advent of new programs which either provide increased Federal participation or provide other benefits (such as participation in the costs of land or of existing buildings). Another factor in the case of teaching institutions is the urgent need to use existing local funds to provide classroom space for the ever-increasing enrollments that they are facing with each passing year.

It is recognized that there is no simple solution to this problem. Nevertheless, it will be watched closely in order to suggest corrective action if the trend is such as to prevent or delay the construction of vitally needed biomedical research facilities.

D. REGIONAL AND NATIONAL FACILITIES

Although here treated separately, the need for certain complex and expensive research resources designed to serve regional or national needs is but one facet of the more general problem of obtaining local funds for matching purposes. The difference here lies in the fact that, whereas the regular construction grants have as their primary purpose the expansion or improvement of the research capability of an institution so as to meet its own needs for health science research, special grants for regional or national facilities would be designed to provide highly specialized research centers conducting programs which are pointed directly toward regional or national objectives. In most instances the staff of such facilities is recruited from a number of participating institutions and the host institution serves primarily as a housekeeper. When presented with the need for research centers of this type, designed for research areas of such national concern as cardiovascular studies, cancer investigations, biomedical engineering investigations, germ-free animal resources, pharmacology and toxicology centers, and the like, even the most sophisticated institutions express a reluctance to bear any portion of the costs of construction.

As a result there have been significant delays in the establishment of vitally needed programs of this type. It is suggested, therefore, that a definite need has been demonstrated for provision of a limited program which would provide full Federal support for special facilities needed for biomedical programs of regional or national interest.

V. CONCLUSION

In conclusion, it is gratifying for me, as a recently appointed Surgeon General, to report, with the concurrence of the National Advisory Council on Health Research Facilities, on the successes of the health research facilities program during its first decade of operation, as well as to cite some of its problems and unmet needs. The role of the Federal Government in participating in the construction and equipping of critically needed health research facilities in all of the States of the Union, attest to the essentiality of this program to the health needs of the Nation.

No one can predict where the next breakthrough will occur or when spectacular success will emblazon any of the painstaking, diligent investigations that are carried on day after day in health research laboratories throughout the country. But in each case where construction and renovation grants have been made under the health research facilities program, the high quality of the scientific staff, their past achievements, and the proposed research programs for the new facility represent the tangible promise of major scientific advances of the future.

These facilities are the seedbeds of medical discoveries, great and small, that, transmitted from scientist to practitioner, result in improved techniques of prevention, diagnosis, and treatment of the diseases and handicaps that beset man. Through provision of these facilities, the Public Health Service is vastly aided in fulfilling its mission "to protect and advance the health of the American people."

I should like, again, to express my personal satisfaction on the accomplishments thus far achieved, to assure every continued effort in this very worthy endeavor, and to extend high credit to the Advisory Council, the Scientific Review Committee, and the staff, in helping to achieve the goals of the Health Research Facilities Act.

WILLIAM H. STEWART,
Surgeon General.

JUNE 15, 1966.

RANDOM SAMPLING OF PHOTOGRAPHS
ILLUSTRATING SOME HEALTH RESEARCH
FACILITIES COMPLETED DURING 1965

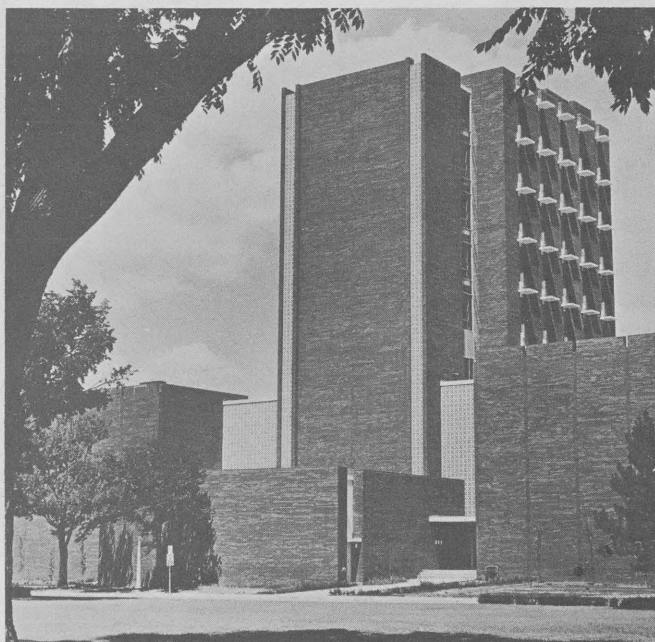
RANDOM ALLELES OF PHOENIX
IN ESTIMATING SOME OF THE
RELATIVE CONTRIBUTIONS OF



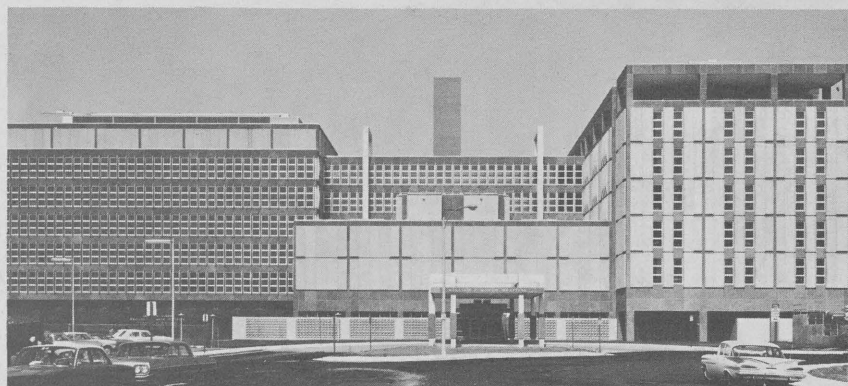
Research Addition to the Eastman Dental Dispensary, Rochester, N.Y. Cost of health-related research area: \$580,823; HRF grant: \$254,666.



Kildee Hall, Iowa State University of Science and Technology, Ames, Iowa. Cost of health-related research area: \$326,000 (approximate); HRF grant: \$162,769.



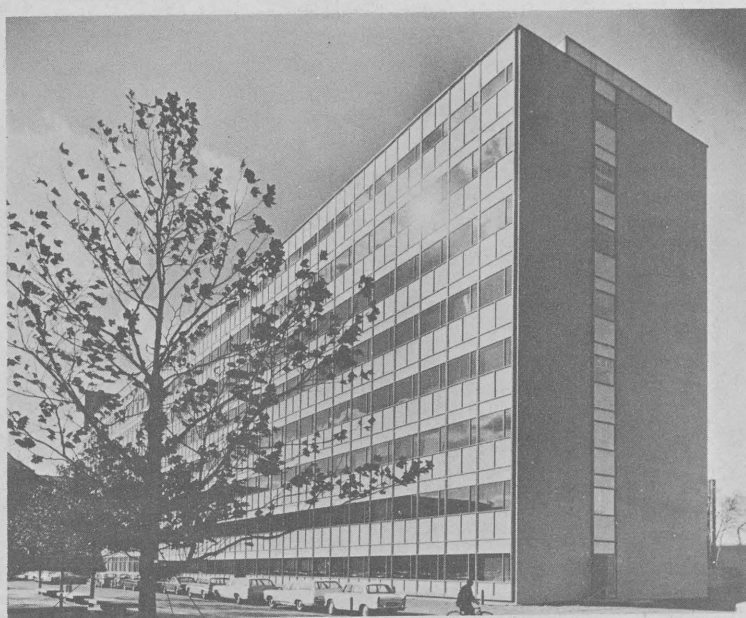
Botany and Microbiology Building, University of Oklahoma, Norman, Okla. Cost of health-related research area: \$679,196; HRF grant: \$326,200.



James K. Dobbs Institute for Medical Research (building at left), University of Tennessee and City of Memphis Hospitals, Memphis, Tenn. Cost of health-related research area: \$2,100,000 (approximate); HRF grant: \$1,021,353.



The Eugene C. Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska, College of Medicine, Omaha, Nebr. Cost of health-related research area: \$1,800,000; HRF grant: \$803,769.



Whitaker Building for the Center for Life Sciences, Massachusetts Institute of Technology, Cambridge, Mass. Cost of health-related research area: \$4,500,000 (approximate); HRF grant: \$2,129,082.



Cell and Virus Research Building, Roswell Park Memorial Institute of the New York State Department of Health, Buffalo, N.Y. Cost of health-related research area: \$4,638,605 (tentative); HRF grant: \$1,500,000.



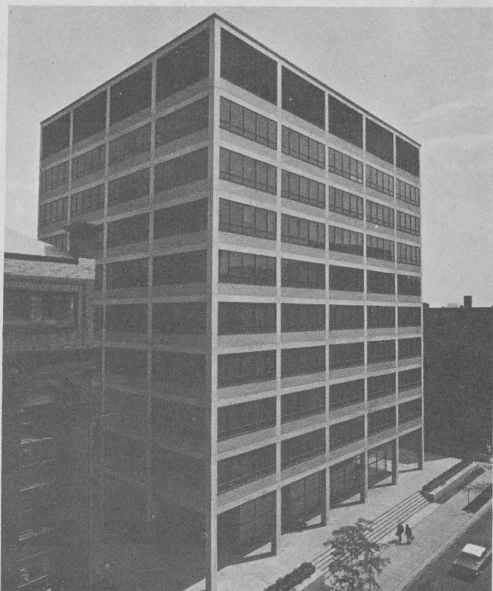
Medical Science Addition Building, University of Illinois/at the Medical Center, Chicago, Ill. Cost of health-related research area: \$2,480,000 (approximate); HRF grant: \$1,238,605.



New Laboratory Wing, The Institute for Cancer Research, Philadelphia, Pa. Cost of health-related research area: \$1,861,410; HRF grant: \$750,000.



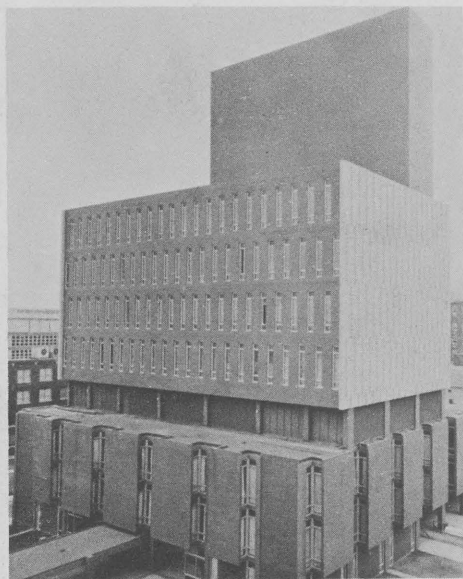
William Black Research Building, Columbia University, College of Physicians and Surgeons, New York, N.Y. Cost of health-related research area: \$14,957,945 (approximate); HRF grant: \$3,744,240.



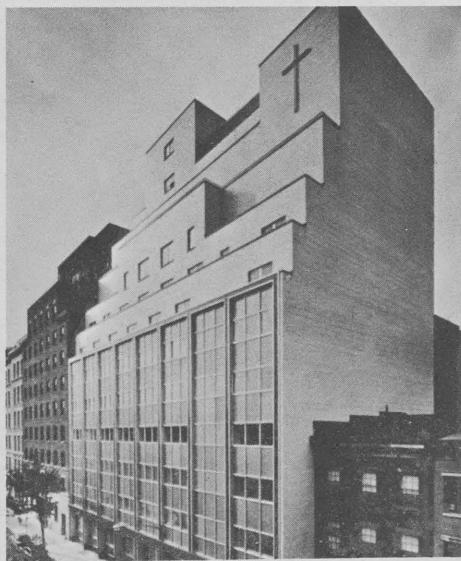
The Hektoen Institute for Medical Research, Cook County Hospital, Chicago, Ill. Cost of health-related research area: \$6,454,278 (approximate); HRF grant: \$1,338,606.



William James Hall, Behavioral Sciences Building, Harvard University, Cambridge, Mass. Cost of health-related research area: \$1,230,000 (approximate); HRF grant: \$553,110.



Clinical Services Building, the University of Tennessee and City of Memphis Hospitals, Memphis, Tenn. Cost of health-related research area: \$435,775; HRF grant: \$144,422.



Dr. Harold R. Cronin Research Building, The St. Vincent's Hospital of the City of New York, New York, N.Y. Cost of health-related research area: \$3,617,895; HRF grant: \$882,410.



Rehabilitation Research Unit, University of California, Los Angeles, Calif. Cost of health-related research area: \$1,091,283; HRF grant: \$400,000.

APPENDIXES

APPENDIX I

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
UNITED STATES and PUERTO RICO (total)				\$461,086,054	\$361,419,724
ALABAMA (total)				2,980,728	2,772,902
Auburn University, Auburn	Research in nutrition	364	School of veterinary medicine	70,000	70,000
Do	Veterinary research	366	do	224,385	224,385
Do	Sanitary engineering	958	University	10,400	10,334
Do	Human nutrition and infant research	923	do	61,980	56,312
Do	Nuclear science	1009	do	144,059	137,527
Do	Biochemistry	924	do	153,560	60,290
Do	Environmental physiology	3172	College of agriculture	22,050	22,000
Children's Hospital, Birmingham	Clinical research and drug evaluation	930	Hospital	27,100	27,100
Southern Research Institute, Birmingham	Medical research	46	Research institute	250,000	250,000
Do	do	740	do	250,000	150,000
University of Alabama, Birmingham	Basic and clinical research	32	Medical school	1,194,394	1,192,154
University of Alabama Medical Center, Birmingham	Clinical and dental research	3104	Medical and dental school	572,800	572,800
ALASKA (total)				791,506	500,000
University of Alaska, College	Arctic biology	3086	University	791,506	500,000
ARIZONA (total)				3,478,431	2,354,086
Arizona State University, Tempe	Life sciences	123	University	536,992	280,392
St. Joseph's Hospital, Phoenix	Neurological research	617	Hospital	352,064	53,635
University of Arizona, Tucson	Biological research	223	University	83,900	83,900
Do	Animal pathology	443	College of agriculture	7,375	7,375
Do	Animal science	529	do	13,120	13,120
Do	Pharmaceutical chemistry	630	College of pharmacy	13,350	8,837
Do	Nutrition research	398	College of agriculture	29,000	3,059
Do	Basic medical research	629	do	465,159	296,518
Do	Biophysics	706	University	64,000	55,250
Do	Microbiology	3049	do	567,436	300,000
Do	Basic medical research	J141	Medical school	1,346,035	1,252,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
ARKANSAS (total) -----				\$1, 503, 450	\$1, 216, 000
University of Arkansas, Fayetteville	Infectious diseases	1121	University	352, 595	150, 000
University of Arkansas Medical Center, Little Rock	Medical and clinical research	356	Medical school	1, 150, 855	1, 066, 000
CALIFORNIA (total) -----				52, 731, 256	40, 473, 312
California Institute of Technology, Pasadena	Biological research	29	Technical college	477, 000	477, 000
Do	do	333	do	54, 250	54, 250
Do	do	831	do	16, 100	16, 100
Do	Sanitary engineering	377	do	86, 033	39, 900
California State Department of Public Health, Berkeley	Cancer research	3165	Research institute	81, 350	81, 000
Cedars of Lebanon-Mount Sinai Hospital of the Los Angeles Jewish Center, Los Angeles	Basic medical and clinical research	560	Hospital	516, 571	456, 534
Do	do	741	do	598, 261	216, 542
Do	Clinical-medical	1083	do	105, 675	32, 985
Children's Hospital of East Bay, Oakland	Pediatrics	309	do	167, 587	75, 000
Children's Hospital Society of Los Angeles, Los Angeles	do	108	do	131, 330	102, 014
Children's Hospital of San Francisco, Calif	Medical research	1173	do	454, 048	439, 628
City and County of San Francisco (San Francisco General Hospital) San Francisco	Animal pathology	1099	do	634, 222	564, 116
City of Hope Medical Center, Duarte	Clinical research	386	do	742, 055	112, 000
Do	Biology	3016	do	325, 496	325, 000
Highland Alameda County Hospital, Oakland	Lipid metabolism	625	do	101, 414	65, 987
Kaiser Foundation Hospitals, San Francisco	Allergy	988	Research foundation	49, 280	49, 280
The Langley Porter Neuro-Psychiatric Institute, San Francisco	Mental health	272	Psychiatric hospital	227, 820	150, 000
Loma Linda University, Los Angeles	Clinical science	3107	Medical school	1, 808, 362	1, 331, 000
Los Angeles County General Hospital, Los Angeles	Basic and clinical medical research	3083	Hospital	446, 697	400, 000
Mount Zion Hospital & Medical Center, San Francisco	Basic medical and clinical research	721	do	175, 000	173, 483
Pacific State Hospital, Pomona	Mental health	768	do	546, 407	538, 830
Palo Alto Medical Research Foundation, Palo Alto	Health related sciences	26	Research foundation	282, 145	282, 145
Do	Medical research	3187	do	51, 392	45, 651
Pasadena Foundation for Medical Research, Pasadena	Basic medical research	534	do	29, 572	5, 740
Presbyterian Hospital & Medical Center, San Francisco	Surgical and cardiovascular	910	Hospital	288, 340	274, 200
Do	Clinical research	3094	do	383, 750	383, 750
Rancho Los Amigos Hospital, Downey	Research in chronic diseases	572	County hospital	304, 000	304, 000
Rees Stealy Clinic Research Foundation, San Diego	Medical research	438	Research foundation	5, 000	5, 000
Reiss Davis Clinic for Child Guidance, Los Angeles	Psychiatry	605	Child guidance clinic	102, 292	28, 213
Salk Institute for Biological Studies, La Jolla	Molecular biology	3136	Research institute	1, 010, 400	1, 010, 400
Scripps Clinic & Research Foundation, La Jolla	Medical research	588	Research foundation	589, 915	214, 050
Do	Biochemistry	1051	do	87, 475	87, 475
Do	Microbiology research	3022	do	522, 750	522, 750
Stanford Research Institute, Menlo Park	Biological research	548	Research institute	598, 024	300, 000
Do	Life sciences research	3150	do	500, 000	500, 000

Stanford University, Palo Alto	Basic medical sciences	15	Medical school	2,870,891	2,804,054
Do	Neurophysiology	1024	do	117,500	86,418
Do	Clinical research	1166	do	2,254,840	2,117,588
Stanford University, Stanford	Chemistry of natural products	657	University	210,000	210,000
Do	Sanitary engineering	1010	do	98,290	89,547
University of California, Berkeley	Biochemistry	575	do	1,002,600	766,745
Do	do	720	do	107,500	107,500
University of California, Davis	Bacteriology, genetics, and biochemistry	670	do	1,266,972	837,275
Do	Animal diseases	919	School of veterinary medicine	722,725	722,725
Do	Biological sciences	3121	University	501,800	429,000
Do	Biology and diseases of animals	3185	School of veterinary medicine	1,816,500	1,805,000
University of California, Los Angeles	Life sciences research	60	University	1,990,000	632,126
Do	Chronic disease research	827	Medical school	924,973	400,000
Do	Ophthalmology research	3198	do	736,614	363,386
Do	Neurology and psychiatry	86	do	1,625,623	1,337,625
Do	Basic sciences research	983	do	2,465,067	1,587,434
Do	Pediatrics	707	do	783,677	556,556
University of California, California College of Medicine, Los Angeles	Medical research	571	College of medicine	109,319	107,056
Do	Health sciences	3006	do	68,311	62,321
University of California, Los Angeles	Dental research	3077	Dental school	1,484,601	1,186,434
Do	Health sciences	7061	School of public health	528,135	492,000
University of California, Richmond	Sanitary engineering	557	University	200,000	199,500
University of California, Riverside	Agrichemicals and environmental pollution research	1048	do	393,356	248,332
Do	Psychology	3204	do	1,459,000	435,500
University of California, San Diego	Basic medical sciences	7076	Medical school	1,800,090	1,560,000
University of California, San Diego (facility at La Jolla)	Medical science research	937	University	1,776,000	1,598,400
University of California, San Francisco	Medical sciences	78	Medical school	216,000	25,988
Do	Cardiovascular research	79	do	380,000	251,875
Do	Radiological research	200	do	50,000	24,972
Do	Medical and dental research	258	do	6,852,000	4,438,784
Do	Basic and medical research	7114	do	504,595	432,500
University of the Pacific College of Physicians & Surgeons, San Francisco	Dental research	940	Dental school	515,750	515,750
University of San Francisco, San Francisco	Biological sciences	446	University	367,297	356,398
University of Southern California, Los Angeles	Basic medical research	68	Medical school	899,850	899,850
Do	Biological sciences	3163	University	1,071,867	1,060,650
Do	Medical research	1160	Medical school	2,000,000	2,000,000
Do	Biophysics and biochemistry	3230	University	60,000	60,000
COLORADO (total)				6,799,345	4,986,277
Colorado State University, Fort Collins	Veterinary medicine	35	College of veterinary medicine	100,000	100,000
Do	Physiology	3114	do	163,033	140,880
Do	Metabolic research	574	University	111,228	25,470
Do	Sanitary engineering	582	do	239,071	118,607
Do	Surgical and metabolic research	1044	College of veterinary medicine	260,805	248,775
Do	Radiation biology	3142	do	120,570	109,000
Do	Veterinary medicine	632	do	31,237	15,099
Do	Radiation	3058	do	425,000	425,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
COLORADO—Continued					
General Rose Memorial Hospital, Denver	Clinical research	311	Hospital	\$345,144	\$50,000
Jewish National Home for Asthmatic Children, Denver	Asthma and allergy research	213	Research institute	203,952	100,000
National Jewish Hospital, Denver	Medical research (chest diseases)	33	do.	669,779	274,943
Do.	do.	844	do.	4,806	4,404
Penrose Hospital, Colorado Springs	Radiobiology, clinical and cancer research	3240	Hospital	525,579	150,000
Do.	Medical research	504	do.	4,023	4,023
University of Colorado Medical Center, Denver	do.	602	Medical school	31,500	31,500
Do.	Medical and dental research	492	do.	2,001,881	1,711,561
Do.	Medical research	3196	do.	1,194,573	1,151,000
Do.	Psychiatry	903	do.	83,005	72,580
Do.	Organ transplantation	3156	do.	98,170	98,000
Webb Institute for Medical Research and University of Colorado Medical Center, Denver	Biochemical and microbial genetics	530	do.	62,938	55,435
Do.	Medical research	1059	do.	123,051	100,000
CONNECTICUT (total)				14,372,988	10,514,979
Connecticut State Department of Mental Health, Hartford (facility at New Haven)	Mental health research	1016	Research institute	525,387	520,454
Hartford Hospital, Hartford	Medical-clinical research	393	Hospital	80,558	80,191
Do.	do.	774	do.	29,397	16,086
John B. Pierce Foundation of Connecticut, New Haven	Basic medical research	960	Research foundation	305,367	195,757
St. Francis Hospital, Hartford	Cardiovascular research	476	Hospital	49,260	34,079
University of Connecticut, Storrs	Pharmacy	156	School of pharmacy	377,798	167,136
Do.	Genetics and dental research	3066	University and dental school	767,175	424,000
Do.	Life sciences research	158	University	1,000,658	650,000
Do.	Pharmacology and biochemistry research	3012	School of pharmacy	194,500	169,651
Yale University, New Haven (facility at Bethany)	Animal pathology	715	Medical school	42,200	42,200
Yale University, New Haven	Biological research	1135	University	3,648,508	1,500,000
Do.	Biophysics	286	do.	300,000	150,000
Do.	Biophysical chemistry	839	do.	856,580	856,580
Do.	Anatomy and biochemistry	36	do.	517,850	389,400
Do.	Clinical research	1175	Medical school	1,684,503	1,537,357
Do.	Medical research	3177	do.	707,585	672,500
Do.	Microbiology	726	do.	80,000	80,000
Do.	Medicine and pediatrics	237	do.	285,415	276,153
Do.	Otolaryngology and ophthalmology	3178	do.	250,476	161,675
Do.	Pharmacology	3206	do.	229,680	229,680
Do.	Surgical research	3048	do.	53,856	40,593
Do.	Pathology	711	do.	93,200	77,456
Do.	Metabolic research	784	do.	25,000	20,294

Do.....	Clinical research.....	3170	do.....	365,840	365,500
Do.....	Epidemiology.....	1066	do.....	1,902,195	1,858,237
DELAWARE (total).....				406,915	298,155
University of Delaware, Newark.....	Biological sciences and psychology.....	1014	University.....	406,915	298,155
DISTRICT OF COLUMBIA (total).....				3,679,942	1,843,006
Catholic University of America.....	Biology.....	507	University.....	684,019	216,642
Children's Hospital of the District of Columbia.....	Pediatric disease research.....	69	Hospital.....	150,000	150,000
George Washington University.....	Medical and surgical research.....	306	Medical school.....	45,000	45,000
Do.....	do.....	3115	do.....	127,782	121,158
Georgetown University.....	Medical research.....	22	do.....	82,500	82,500
Do.....	do.....	305	do.....	220,261	186,806
Do.....	Science and basic health research.....	432	University.....	1,218,425	350,000
Do.....	Dental and basic sciences research.....	142	Medical and dental school.....	666,005	665,900
Washington Hospital Center.....	Medical and clinical research.....	640	Hospital.....	485,950	25,000
FLORIDA (total).....				8,138,517	6,626,734
Florida State Board of Health, Vero Beach.....	Medical entomology.....	328	Research center.....	30,367	28,867
Florida State Board of Health, Jacksonville.....	Entomology.....	3174	do.....	45,729	45,600
Florida State University, Tallahassee.....	Biological sciences.....	695	University.....	475,000	475,000
Do.....	Psychology.....	762	do.....	479,381	327,928
Do.....	Biological sciences.....	3072	do.....	927,500	162,127
Do.....	Chemistry.....	3050	do.....	546,145	538,104
Mount Sinai Hospital of Greater Miami, Inc., Miami.....	Cardiopulmonary research.....	248	Hospital.....	217,500	33,278
University of Florida, Gainesville.....	Medical and clinical research.....	146	Medical school.....	642,938	540,000
Do.....	Sanitary engineering.....	172	University.....	27,670	26,612
Do.....	Air pollution research.....	442	do.....	8,330	8,110
Do.....	Environmental engineering.....	3173	do.....	462,626	285,675
Do.....	Pediatrics and mental illness.....	3231	Medical school.....	503,185	484,195
Do.....	Medical research.....	520	do.....	26,000	25,107
Do.....	do.....	890	do.....	68,800	60,517
Do.....	Entomology.....	858	University.....	9,961	6,000
Do.....	Pharmacology and pediatrics.....	3095	Medical school.....	112,204	111,516
Do.....	Nuclear science.....	1116	University.....	168,865	168,865
Do.....	Radiology.....	3079	Medical school.....	28,600	28,600
University of Miami, Miami.....	Basic medical research.....	14	do.....	1,095,577	1,070,748
Do.....	Basic medical and clinical.....	130	Hospital.....	117,500	72,877
Do.....	Medical science research.....	3139	Medical school.....	1,656,000	1,654,000
Do.....	Ophthalmology.....	3233	do.....	84,050	77,000
University of Miami and Board of Dade County Commissioners, Miami.....	do.....	686	do.....	80,612	80,612
University of South Florida, Tampa.....	Biological research.....	850	University.....	207,731	198,850
Variety Children's Hospital, Miami.....	Pediatric research.....	338	Hospital.....	116,246	116,246

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
GEORGIA (total)				\$5,951,422	\$4,706,371
Emory University, Atlanta	Medical research	30	Medical school	370,750	354,106
Do	Biology research	489	University	100,164	100,164
Emory University, Atlanta (facility at Lawrenceville)	Primate research	3280	do	28,500	28,500
Emory University, Atlanta	Medical research	1013	Medical school	1,076,103	882,216
Do	Clinical research	1050	do	714,104	666,267
Georgia Institute of Technology, Atlanta	Radioisotope and biological research	182	University	204,500	125,000
Do	Chemistry (natural products)	581	do	8,500	5,815
Do	Sanitary engineering	708	do	22,250	18,597
Do	Micromeritics	887	do	46,379	46,379
Georgia State Department of Public Health, Atlanta	Mental health	1058	Public health department	1,348,611	700,000
Grady Memorial Hospital, Atlanta	Clinical research	543	Hospital	40,967	20,484
Medical College of Georgia, Augusta	Biological research	3010	Medical school	160,982	160,982
Medical College of Georgia, Eugene Talmadge Memorial Hospital, Augusta	Clinical research	343	Medical school and hospital	835,011	787,460
Piedmont Hospital, Atlanta	Basic and clinical research	699	Hospital	97,220	79,364
University of Georgia, Athens	Biological sciences	226	University	631,037	631,037
Do	Pharmacy	431	School of pharmacy	266,344	100,000
HAWAII (total)				1,791,353	1,445,125
The Queen's Hospital, Honolulu	Medical and clinical research	34	Hospital	201,353	50,000
University of Hawaii, Honolulu	Basic medical research	647	University	250,000	243,125
Do	Biomedical research	J087	School of medicine and school of public health	1,340,000	1,152,000
IDAHO (total)				19,076	19,076
Idaho State College, Pocatello	Pharmacy	384	College of pharmacy	19,076	19,076
ILLINOIS (total)				37,258,864	26,565,997
American Dental Association, Chicago	Dentistry	3162	Research institute	592,772	426,678
Chicago College of Osteopathy, Chicago	Physiology and pharmacology	576	Osteopathic school	5,548	5,469
Chicago Medical School, Chicago	Basic medical and clinical research	92	Medical school	1,621,696	1,121,696
Chicago Wesley Memorial Hospital, Chicago	Clinical research	224	Hospital	155,852	49,068
Do	Medical research	848	do	95,919	89,479
Children's Memorial Hospital, Chicago	Pediatric research	739	do	776,265	680,372
City of Chicago, Board of Health and Public Building Commission	Chronic diseases	1194	Department of public health	896,042	300,000
Evanston Hospital Association, Evanston	Clinical research	750	Hospital	70,478	66,378
Hektoen Institute for Medical Research of Cook County	do	157	Research institute	250,000	250,000

Hospital, Chicago.					
Do.	Basic and clinical research.	3075	do	1,400,181	1,338,606
Do.	Cardiophysiology.	783	do	119,845	65,856
Illinois Department of Mental Health, Elgin.	Biochemical research in nutrition.	113	Hospital	437,041	314,982
Illinois Department of Mental Health, Springfield (Galesburg State Hospital, Galesburg).	Psychiatry.	114	do	260,467	131,762
Do.	do.	3082	do	255,008	154,263
Illinois Department of Mental Health, Chicago.	do.	115	do	292,279	36,148
IIT Research Institute, Chicago.	Research in basic sciences.	473	Research institute	327,869	169,250
Illinois Institute of Technology, Chicago.	Biology.	403	Technical college.	5,095	5,095
Do.	Biology and psychology.	1185	do	996,239	250,000
La Rabida Jackson Park Sanitarium, Chicago.	Rheumatic fever.	194	Hospital.	299,870	192,500
Loyola University, Chicago.	Medical research.	3108	Medical school.	2,590,178	1,970,000
Michael Reese Hospital and Medical Center, Chicago.	Clinical research.	332	Hospital.	1,970,131	1,698,895
Do.	Biological and psychiatric research.	877	do	117,080	117,080
Do.	Obstetrics, gynecology, and pediatrics.	3241	do	371,221	329,000
Northern Illinois University, De Kalb.	Basic medical research.	841	University.	7,500	7,496
Do.	Chemistry-physics.	1021	do	58,250	45,289
Northwestern University, Evanston.	Bioengineering and biochemical.	815	do	1,083,675	648,161
Do.	Medical science research.	909	Medical school.	3,018,989	2,967,399
Presbyterian-St. Luke's Hospital, Chicago.	Basic and clinical research.	379	Hospital.	1,096,700	527,410
Do.	Medical sciences research.	1165	do	1,336,671	750,000
Do.	Renal and nutrition.	3208	do	225,387	150,000
University of Chicago, Chicago.	Obstetrics and gynecology.	17	Medical school.	452,956	250,000
Do.	Physiological psychology.	103	University.	28,233	25,596
Do.	Gastroenterology research.	199	Medical school.	16,500	16,500
Do.	Anatomy research.	265	do	56,100	56,100
Do.	Basic medical sciences.	291	do	44,500	44,500
Do.	Dermatology.	345	do	19,526	19,526
Do.	Clinical research.	251	do	1,128,409	1,127,993
Do.	Pediatrics research.	1188	do	1,858,855	900,000
Do.	Chronic disease research.	526	do	170,042	168,936
Do.	Chemistry.	3045	University.	598,121	312,000
Do.	Biochemical.	550	Medical school.	3,732	3,732
Do.	Zoology research.	262	University.	104,612	94,375
Do.	Physiology.	3182	do	31,715	30,000
Do.	Medical statistics.	540	do	58,976	58,976
Do.	Zoology and psychology.	759	do	35,000	35,000
Do.	Gastrointestinal research.	3088	Medical school.	54,516	49,500
Do.	Physiology.	792	University.	11,263	11,263
Do.	Biological sciences.	314	Medical school.	2,267,453	1,295,000
University of Illinois, Chicago.	Immunology.	87	do	50,000	50,000
Do.	Dental research.	88	Dental school.	26,250	25,260
Do.	Anatomy.	89	Medical school.	2,600	1,701
Do.	Biochemistry.	90	do	8,500	8,500
Do.	Allergy research.	91	do	8,400	8,400
Do.	Medical sciences.	880	do	1,238,605	1,238,605
Do.	Medical research.	173	do	1,425,000	750,000
Do.	Pharmacology.	709	do	3,750	2,593
Do.	Biochemistry and physiology.	1062	do	25,750	25,750
Do.	Public health and preventive medicine.	3243	do	586,000	544,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
ILLINOIS—Continued					
University of Illinois, Chicago (facility at Lisle)	Pharmacy	1063	School of pharmacy	\$127,730	\$100,000
University of Illinois, Chicago	Pathology	1068	Medical school	77,165	62,167
Do	Orthopedics	1069	do	70,950	70,950
University of Illinois, Urbana	Veterinary medicine	399	College of veterinary medicine	139,937	128,100
Do	Arthropod-borne diseases	168	University	942,500	693,015
Do	Chemistry	3017	do	1,212,450	734,987
Do	Parasitology	849	College of veterinary medicine	144,362	134,385
Do	Biochemistry	179	University	89,767	89,502
Do	Life sciences research	1110	do	675,723	632,378
Do	Biophysical research	245	do	225,343	213,598
Do	Sanitary engineering	3046	do	460,837	214,777
Do	Physiology	618	do	140,219	80,000
University of Illinois, Urbana and State Department of Mental Health	Mental retardation	1178	do	1,496,275	1,000,000
University of Illinois, Urbana	Lipid metabolism and nutrition	847	University	400,000	400,000
INDIANA (total)				4,955,562	3,520,800
Caylor Nickel Research Foundation, Bluffton	Medical research	1027	Research foundation	84,800	84,800
Indiana University, Indianapolis	Psychiatry	94	Medical school	103,503	103,503
Do	Medical research	96	do	109,500	109,500
Do	Dental research	97	Dental school	161,972	161,972
Do	Biochemistry	621	Medical school	16,025	16,025
Do	Clinical and medical research	651	do	504,155	357,966
Do	Virus research	1022	do	27,903	26,282
Indiana University, Bloomington	Biology	95	University	21,346	21,346
Do	Psychological research	235	do	622,583	582,049
Do	Physiology	468	do	134,210	126,626
Do	Biochemistry and biological science	727	do	608,008	371,623
Do	Optometry	3123	do	239,621	85,500
Indiana State Department of Mental Health, Indianapolis (facility at Butlerville)	Mental health	912	Hospital	73,762	48,188
New Castle State Hospital, New Castle	Seizure disorders	138	Psychiatric hospital	39,433	30,707
Purdue University, Lafayette	Life sciences	193	University	548,197	548,197
Do	Biophysical chemistry	283	do	24,759	24,499
Do	Veterinary medicine	284	College of veterinary medicine	995,029	300,000
Do	Physiological research	451	University	155,400	155,201
Do	Audiology and bioacoustics	450	do	49,027	24,331
Do	Sanitary engineering	586	do	149,898	71,014
Do	Psychology and genetics	781	do	77,224	65,270
Do	Biological sciences	856	do	94,233	94,233
Do	Veterinary medicine	3068	School of veterinary science and medicine	100,500	100,500

University of Notre Dame du Lac, Notre Dame.....	Biochemistry.....	352	University.....	12,731	9,798
Valparaiso University, Valparaiso.....	Biological research.....	757	do.....	1,743	1,670
Iowa (total).....				3,489,383	2,633,233
Cornell College, Mount Vernon.....	Biology.....	644	College.....	2,799	2,765
Iowa State University of Science and Technology, Ames.....	Biophysics.....	652	College of veterinary medicine.....	200,000	200,000
Do.....	Nutrition.....	681	University.....	40,100	28,239
Do.....	Food sanitation and preservation.....	683	do.....	189,500	119,502
Do.....	Medical research.....	855	College of veterinary medicine.....	65,000	65,000
Do.....	Biochemical research.....	979	University.....	592,291	162,769
Do.....	Animal sciences.....	3232	College of agriculture.....	44,150	38,500
Luther College, Decorah.....	Biology and chemistry.....	501	College.....	81,219	25,000
State University of Iowa, Iowa City.....	Medical research.....	64	Medical school.....	122,208	122,208
Do.....	Otolaryngology.....	65	do.....	25,000	23,201
Do.....	Otological histology.....	260	do.....	3,750	3,750
Do.....	Basic medical and clinical research.....	303	do.....	87,015	81,132
Do.....	Sanitary engineering research.....	330	University.....	12,000	11,916
Do.....	Biology.....	527	do.....	10,000	9,949
Do.....	do.....	485	do.....	8,045	6,877
Do.....	Nutrition.....	517	do.....	30,738	25,967
Do.....	Psychology.....	519	do.....	22,415	22,415
Do.....	Psychiatry.....	598	Medical school.....	264,938	252,045
Do.....	Pharmacy.....	666	College of pharmacy.....	452,715	224,775
Do.....	Pharmacology.....	872	Medical college.....	55,782	42,700
Do.....	Basic medical research.....	879	do.....	483,500	471,838
Do.....	Physiology.....	1105	do.....	69,927	66,685
Do.....	Pathology and audiology.....	3132	University.....	626,291	626,000
KANSAS (total).....				3,431,364	2,107,712
Institute of Logopedics, Inc., Wichita.....	Psychophysical communications.....	650	Clinic and research institute.....	613,755	53,061
Kansas State University of Agriculture & Applied Science, Manhattan.....	Veterinary research.....	436	College of veterinary medicine.....	47,700	47,700
Do.....	Dairy and poultry research.....	537	do.....	93,020	93,020
Do.....	Biochemistry and chemistry.....	3060	University.....	102,914	79,025
Do.....	Psychology.....	731	do.....	5,017	5,017
Do.....	Environmental research.....	885	do.....	80,000	80,000
Do.....	Genetics.....	927	do.....	14,500	14,131
Do.....	Entomology.....	1002	do.....	102,997	102,997
The Menninger Foundation, Topeka.....	Psychiatry.....	1127	Research foundation.....	145,920	159,711
University of Kansas, Lawrence.....	Biological research.....	246	University.....	170,103	135,785
Do.....	Research in environmental health.....	385	do.....	140,632	70,453
Do.....	Vertebrate research.....	641	do.....	159,036	45,731
Do.....	Psychology and sociology.....	3140	do.....	795,631	318,341
University of Kansas Medical Center, Kansas City.....	Clinical research.....	471	Medical school.....	50,000	50,000
Do.....	Medical science research.....	470	do.....	850,200	850,200
Washburn University, Topeka.....	Psychology.....	963	University.....	3,225	2,540

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
KENTUCKY (total)				\$4,436,999	\$3,931,737
Kentucky State Department of Health, Frankfort	Public health	524	Health department	376,255	100,000
University of Kentucky, Lexington	Basic medical sciences	56	Medical school	1,407,342	1,387,539
Do	Medical research	3113	do	125,000	125,000
Do	Dental research	634	Dental school	757,533	645,827
University of Kentucky, Lexington (Research Foundation)	Sanitary engineering	735	University	5,620	2,809
University of Louisville, Louisville	Chemistry	196	do	50,000	50,000
Do	Children's psychiatric research	1187	Medical school	118,604	114,257
Do	Basic and clinical research	319	Medical and dental schools	1,536,645	1,473,095
Williamson Appalachian Regional Hospital, South Williamson	Medical research	360	Hospital	60,000	33,210
LOUISIANA (total)				5,233,744	4,232,123
Alton Ochsner Medical Foundation, New Orleans	Clinical and medical research	101	Research foundation	325,000	200,000
Louisiana State University, New Orleans	Basic medical research	814	Medical school	1,500,000	1,468,121
Loyola University of the South, New Orleans	Biochemical and medical technology	603	University	72,949	50,000
Southern University, Baton Rouge	Basic sciences research	729	do	93,407	93,002
Touro Infirmary, New Orleans	Medical and clinical research	99	Hospital	494,200	75,000
Tulane University, New Orleans	Medical research	189	Medical school	2,601,521	2,200,000
Do	Biological evaluation studies	3008	do	146,667	146,000
MAINE (total)				178,475	158,291
The Jackson Laboratory, Bar Harbor	Radiobiology research	301	Research laboratory	25,705	25,058
Do	Animal research facilities	444	do	58,203	47,653
University of Maine, Orono	Natural products research	419	University	9,628	9,410
Do	Animal pathology	568	do	29,135	25,506
Do	Chemistry	1101	do	23,702	21,288
Do	Animal pathology	820	do	6,500	6,248
Do	Environmental engineering	1150	do	25,602	23,128
MARYLAND (total)				11,776,740	10,978,033
American Type Culture Collection, Rockville	Microbiological culture research	635	Research institute	98,858	90,278
Baltimore City Hospitals, Baltimore	Medical research	110	Hospital	115,000	115,000
Church Home & Hospital, Baltimore	do	464	do	3,500	2,349
Goucher College, Towson	Chemistry	1181	College	102,789	102,789
Johns Hopkins Hospital, Baltimore	Pediatric research	667	Hospital	1,019,932	1,009,583
Do	Otolaryngology	753	do	60,840	54,590
Do	Ophthalmological research	876	do	531,113	491,463
Do	Pediatrics	3157	do	103,764	85,150
Johns Hopkins University, Baltimore	Basic medical research	106	Medical school	1,860,000	1,860,000
Do	do	853	do	181,401	176,319

Do.....	Biophysics research.....	358	do.....	483,000	350,000
Johns Hopkins University, Baltimore (Homewood Campus).....	do.....	288	University.....	275,000	150,000
Johns Hopkins University, Baltimore.....	Radiological science.....	779	School of hygiene and public health.....	870,497	826,144
Do.....	Hygiene and public health.....	J025	do.....	335,006	333,500
Johns Hopkins University, Baltimore (Homewood Campus).....	Biological sciences.....	562	University.....	403,375	403,375
Johns Hopkins University, Baltimore.....	Medical research.....	3222	do.....	2,417,596	2,256,500
Do.....	Chemistry.....	3015	do.....	296,634	247,245
Do.....	Biochemistry.....	3260	do.....	124,023	116,000
Maryland State Department of Mental Hygiene-Spring Grove State Hospital, Catonsville.....	Psychiatry.....	3258	Hospital.....	550,000	514,000
Sinai Hospital of Baltimore, Inc., Baltimore.....	Basic medical and clinical research.....	11	do.....	198,207	53,428
University of Maryland, Baltimore.....	Basic medical research.....	728	Medical school.....	853,918	853,918
Do.....	Clinical research.....	954	do.....	104,787	98,902
Do.....	Shock study.....	1151	do.....	787,500	787,500
MASSACHUSETTS (total).....				37,309,043	30,084,142
Amherst College, Amherst.....	Microbiology and chemistry.....	389	College.....	160,050	143,064
Austen Riggs Center, Inc., Stockbridge.....	Psychiatric research.....	16	Research institute.....	191,367	191,367
Beth Israel Hospital, Boston.....	Basic medical and clinical research.....	746	Hospital.....	1,005,976	858,352
Boston City Hospital, Boston.....	Pathology.....	440	do.....	41,710	29,555
Do.....	Clinical research.....	552	do.....	150,000	150,000
Do.....	Neurology.....	1159	do.....	30,000	28,641
Do.....	Medical bacteriology.....	3151	do.....	437,328	437,000
Boston City Hospital, Sears Surgical Laboratory, Boston.....	Cellular and tissue metabolism.....	220	Research laboratory.....	258,443	100,000
Boston City Hospital, Thorndike Memorial Laboratory, Boston.....	Medical-clinical research.....	273	do.....	225,000	225,000
Boston College, Chestnut Hill.....	Biological sciences.....	3078	College.....	890,700	100,000
Boston Dispensary, Boston.....	Rehabilitation and geriatrics.....	72	Hospital.....	150,000	133,356
Boston Lying-In Hospital, Boston.....	Obstetric research.....	163	do.....	327,867	198,650
Boston University, Boston.....	Medical and basic science research.....	132	Medical school.....	1,500,000	1,500,000
Do.....	Basic medical research.....	3255	do.....	850,575	850,000
Do.....	Biological research.....	868	University.....	150,466	7,522
Do.....	Basic medical research.....	J140	Medical school.....	447,031	447,000
Brandeis University, Waltham.....	Biochemistry.....	148	University.....	387,500	363,373
Do.....	Chemistry.....	843	do.....	349,579	349,579
Do.....	Biochemistry.....	1179	do.....	547,800	547,800
Do.....	Advanced studies in social welfare.....	3212	do.....	242,000	242,000
Children's Cancer Research Foundation, Boston.....	Cancer and basic research.....	270	Research foundation.....	612,752	400,000
Children's Hospital, Boston.....	Surgical research.....	207	Hospital.....	156,017	142,217
Clark University, Worcester.....	Psychology.....	124	University.....	37,822	33,338
Do.....	Biological research.....	694	do.....	84,598	84,375
Diabetes Foundation, Inc., Boston.....	Clinical research.....	3039	Research foundation.....	668,311	328,150
Forsyth Dental Center, Boston.....	Dental research.....	365	Research center.....	156,260	131,174
Do.....	do.....	3271	do.....	1,289,934	1,102,000
Harvard University, Boston.....	Physiology.....	732	Medical school.....	201,155	193,329
Do.....	Bacteriology and pathology.....	3103	do.....	232,500	151,000
Do.....	Anatomy and pharmacology.....	816	do.....	1,412,597	1,034,136

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
MASSACHUSETTS—Continued					
Harvard University, Cambridge	Basic science research	135	University	\$940,400	\$904,218
Do	Behavioral sciences	578	do	161,131	161,131
Do	do	1052	do	553,110	553,110
Do	Psychology	3080	do	398,000	94,051
Harvard University, Boston	Anatomy and pharmacology	231	Medical school	1,110,900	1,081,377
Do	Physiology research	3020	do	197,500	151,994
Do	Histopathology and periodontology	3180	School of dental medicine	67,500	67,500
Harvard University, Boston (facility at Southborough)	Biological research	645	Medical school	228,500	191,000
Harvard University, Boston	Nutrition and environmental hygiene	490	School of public health	2,123,966	1,688,478
Do	Nutrition	1120	do	530,802	525,802
Do	Public health sciences	3223	do	2,819,605	2,470,600
Holy Ghost Hospital, Cambridge	Cancer research	494	Hospital	143,049	72,271
Marine Biology Laboratory, Woods Hole	Basic and biological sciences	300	Research laboratory	738,500	369,250
Massachusetts Eye and Ear Infirmary, Boston	Ophthalmology	410	Hospital	45,050	35,745
Massachusetts General Hospital, Boston	Neurosurgery	4	do	244,850	95,938
Do	Psychiatry	42	do	106,503	93,069
Do	Basic neurological research	187	do	157,345	146,320
Do	Allergy	215	do	28,350	20,112
Do	Medical research	3228	do	2,348,989	2,210,900
Do	Orthopedic research	308	do	218,804	107,370
Do	Cardiopulmonary research	3001	do	238,290	234,548
Do	Neurological research	335	do	396,927	365,616
Do	Hematology research	458	do	43,470	37,502
Do	Thyroid research	547	do	45,664	45,664
Massachusetts Institute of Technology, Cambridge	Biology	591	University	110,050	100,633
Do	Biology and nutrition	813	do	2,129,082	2,129,082
Do	Psychology	902	do	252,690	252,690
Medfield Foundation, Inc., Medfield	Mental health	606	Research foundation	15,732	15,732
Memorial Hospital, Worcester	Clinical research	376	Hospital	128,785	114,597
New England Center Hospital, Boston	Medical research	28	do	775,282	438,643
Do	Biochemical	3029	do	467,743	400,715
New England Deaconess Hospital, Boston	Cancer research	31	do	135,000	120,000
Do	Radiology	812	do	900,000	816,364
Northeastern University, Boston	Psychology	1141	University	276,879	50,000
Peter Bent Brigham Hospital, Boston	Orthopedic research	1097	Hospital	146,557	22,111
Do	Organ replacement	3092	do	152,677	47,516
Red Acre Farm, Stow	Biological research	341	Research laboratory	23,076	23,076
Retina Foundation, Boston	Eye research	44	Research foundation	874,652	692,654
Do	do	3181	do	642,160	300,000
Robert B. Brigham Hospital, Boston	Research in rheumatic diseases	317	Hospital	11,159	7,525
St. Elizabeth's Hospital, Brighton	Medical sciences	3085	do	275,477	275,477
Tufts University, Boston	Biochemistry and nutrition	128	Medical school	25,160	22,448
Do	Pharmacology	406	do	30,687	23,740
Do	Basic science research	685	do	677,000	677,000

Do.....	Anatomy.....	3169	do.....	114,031	91,000
Do.....	Dentistry and biochemistry.....	3214	Dental and medical school.....	133,820	133,800
Tufts University, Medford.....	Sanitary engineering.....	921	University.....	5,081	5,065
Tufts University, West Somerville.....	Organic chemistry.....	1149	do.....	120,623	45,681
University of Massachusetts, Amherst.....	Psychology.....	112	do.....	209,370	176,656
Do.....	Zoology.....	144	do.....	375,800	240,304
Do.....	Biochemistry.....	205	do.....	22,600	4,375
Do.....	Bacteriology and zoology.....	461	do.....	677,557	132,212
Do.....	Animal pathology.....	764	do.....	9,500	8,965
Worcester Foundation for Experimental Biology, Shrewsbury.....	Biology.....	98	Research foundation.....	433,270	358,710
Do.....	Biochemical research.....	1164	do.....	75,000	68,827
MICHIGAN (total).....				18,177,407	13,839,414
Hawthorn Center, Northville.....	Psychiatry.....	687	Hospital.....	75,000	75,000
Do.....	Biological research.....	3256	do.....	59,600	50,000
Henry Ford Hospital, Detroit.....	Otological research.....	493	do.....	28,600	26,494
Michigan State Department of Mental Health, Detroit (Lafayette Clinic).....	Psychiatry.....	3149	do.....	550,000	550,000
Michigan State University, East Lansing.....	Biological research.....	183	University.....	325,000	310,000
Do.....	Biochemistry and biomedical research.....	1000	do.....	3,291,771	2,000,000
Do.....	Food science.....	3193	College of agriculture.....	1,196,570	329,000
Sinai Hospital of Detroit, Detroit.....	Medical research.....	3081	Hospital.....	714,944	315,285
University of Detroit, Detroit.....	Dental research.....	1142	Dental school.....	210,593	156,534
University of Michigan, Ann Arbor.....	Mental health research.....	37	Medical School.....	1,143,350	561,373
Do.....	Medical research.....	71	do.....	86,500	61,912
Do.....	do.....	177	do.....	137,500	52,011
Do.....	Tissue culture.....	197	do.....	30,000	22,548
Do.....	Medical research.....	863	do.....	250,000	206,529
Do.....	do.....	918	do.....	1,575,000	1,570,749
Do.....	Hematology research.....	3000	do.....	79,500	77,663
Do.....	Research in public health.....	80	School of public health.....	871,985	746,225
Do.....	Cellular biology.....	808	University.....	427,234	427,234
Do.....	Medical statistics.....	395	do.....	600,000	379,124
Do.....	Biological chemistry.....	368	Medical school.....	36,850	25,825
Do.....	Basic medical sciences.....	3226	do.....	2,645,000	2,545,000
Do.....	Genetics.....	953	do.....	256,800	256,800
Do.....	Pharmacy.....	198	School of pharmacy.....	400,000	339,500
Do.....	Dental research.....	1015	School of dentistry.....	937,241	600,000
Wayne State University, Detroit.....	Life sciences.....	53	University.....	685,000	547,250
Do.....	Environmental health research.....	532	Medical school.....	26,497	25,486
Do.....	Medical research.....	658	do.....	1,524,572	1,524,572
Do.....	Surgery.....	3100	do.....	57,300	57,300
MINNESOTA (total).....				7,401,728	6,571,974
Augsburg College, Minneapolis.....	Organic and physical chemistry.....	756	College.....	5,500	4,804
Carleton College, Northfield.....	Biological research.....	668	do.....	118,470	18,401
Hamline University, St. Paul.....	Chemistry.....	935	University.....	10,625	10,456

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Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
MINNESOTA—Continued					
Mayo Foundation, Rochester	Medical research	151	Medical foundation	\$258,470	\$208,283
Do.	Biometrics	701	do.	244,847	108,006
Do.	Medical and surgical research	1078	do.	217,448	158,746
Do.	Hygiene, health, and public welfare	3147	do.	191,138	144,000
Do.	Medical sciences	3216	do.	48,166	48,000
Mayo Foundation-Rochester Methodist Hospital, Rochester.	Dermatology	3245	Hospital	48,318	48,000
Minneapolis Medical Research Foundation, Inc., Minneapolis.	Medical and surgical research	150	Research foundation	107,730	102,871
Do.	Hyperpressure surgical research	1138	do.	72,707	71,146
Do.	Medical and surgical research	718	do.	28,600	28,600
Mount Sinai Hospital, Minneapolis.	Cardiovascular research	351	Hospital	63,227	60,694
Ramsey County Welfare Department and Hospital Facility Building Commission (Ancker Hospital), St. Paul.	Surgery	1098	do.	265,742	265,742
St. Joseph's Hospital, St. Paul.	Cardio pulmonary research	324	do.	93,312	51,559
St. Olaf College, Northfield.	Environmental health research	730	College	4,739	4,728
University of Minnesota, Minneapolis.	Anatomy	19	Medical school	26,110	26,110
Do.	Physiology and pharmacology	20	do.	1,077,630	1,077,630
Do.	Cardiovascular research	127	do.	270,369	229,321
University of Minnesota, St. Paul.	Bacteriology research	1184	School of veterinary medicine	294,343	294,343
University of Minnesota, Minneapolis.	Ophthalmological research	129	Medical school	899,029	893,939
Do.	Cancer	202	do.	305,110	193,452
Do.	Pharmacy	249	College of pharmacy	87,484	87,470
University of Minnesota, St. Paul.	Veterinary research	266	College of veterinary medicine	434,067	329,515
Do.	Biochemistry-biophysics	3137	School of agriculture	1,053,000	996,000
University of Minnesota, Minneapolis.	Chemistry	428	University	41,150	41,150
Do.	Sanitary engineering	457	do.	5,000	4,977
University of Minnesota, Austin.	Biological research	460	Hormel Research Institute	275,356	260,142
University of Minnesota, Minneapolis.	Surgical research	554	Medical school	16,085	15,145
Do.	Pediatric research	693	do.	41,425	41,425
Do.	Organic chemistry	713	University	59,399	41,706
University of Minnesota, St. Paul.	Biochemistry	891	do.	15,125	14,791
University of Minnesota, Minneapolis.	Otolaryngological research	793	Medical school	28,960	20,674
Do.	Epilepsy	3112	do.	125,000	125,000
Do.	Psychiatry, neurology, and pediatric	907	do.	452,453	438,071
Do.	Environmental health	976	School of public health	115,594	107,077
MISSISSIPPI (total)				2,398,161	2,337,863
University of Mississippi School of Medicine and Mississippi State Building Commission, Jackson	Basic medical research	672	Medical school	1,500,000	1,500,000
University of Mississippi and Mississippi State Building Commission, University.	Pharmacy and biology	894	University	321,621	269,000

University of Mississippi at Oxford and Mississippi State Building Commission, Jackson.	Pharmacy	3043	School of pharmacy	500,290	492,613
University of Mississippi, Jackson	Basic medical research	869	Medical school	76,250	76,250
MISSOURI (total)				12,581,024	10,335,720
Barnard Free Skin & Cancer Hospital, St. Louis	Clinical research	3195	Hospital	375,001	290,000
Jewish Hospital of St. Louis, St. Louis	Basic medical sciences	3238	do	892,026	450,000
Malcolm Bliss Mental Health Center, St. Louis	Mental health	674	do	32,000	32,000
Menorah Medical Center, Kansas City	Clinical research	636	do	216,296	189,128
Midwest Research Institute, Kansas City	Basic medical research	316	Research institute	145,457	142,525
St. Louis Children's Hospital, St. Louis	Medical science research	1161	Hospital	626,320	595,394
St. Louis University, St. Louis	Pharmacology	392	Medical school	49,388	49,388
Do	Neurology	1124	do	16,012	16,012
Do	Psychiatry	566	do	62,237	62,237
Do	Biochemistry	3265	do	222,975	222,900
Do	Basic medical research	3266	do	1,369,305	1,369,000
Do	Chemistry	1085	University	100,396	41,926
Do	Surgical and cardiovascular research	1180	Medical school	349,850	349,192
State of Missouri, Division of Mental Diseases, St. Louis (St. Louis State Hospital).	Psychiatry	3087	Research institute	130,768	75,000
University of Missouri at Kansas City	Dental research	66	Dental school	49,975	25,538
Do	Pharmacy	690	School of pharmacy	114,067	50,000
University of Missouri, Columbia	Medical sciences research	1035	Medical school	750,000	750,000
Do	Sanitary engineering	1074	University	8,997	8,988
Do	Animal sciences	3062	do	965,190	300,000
Do	Basic medical and clinical research	312	Medical school	425,000	391,596
Do	Medical research	809	do	624,946	150,000
University of Missouri, Rolla	Sanitary engineering	968	University	7,300	7,300
University of Missouri, Columbia	Biological research	962	do	64,650	40,000
Do	Veterinary research	1186	College of veterinary medicine	212,075	196,488
Washington University, St. Louis	Medical research	41	Medical school	77,789	70,835
Do	Basic medical sciences	3257	do	211,383	210,000
Do	Basic medical and clinical research	1088	do	2,377,947	2,370,700
Do	do	49	Medical school and hospital	811,488	811,488
Do	Life sciences	70	University	189,886	162,951
Do	Sanitary engineering	277	do	27,917	25,599
Do	Dental research	263	Dental school	270,700	200,000
Do	Cardiology	3056	Medical school	59,875	44,033
Do	Sanitary engineering	633	University	19,988	19,587
Do	Psychiatry	819	Medical school	179,090	168,669
Do	Environmental engineering	1079	University	135,351	126,654
Do	Biology	1113	do	409,379	320,599
MONTANA (total)				2,157,803	1,026,112
Montana Deaconess Hospital, Great Falls	Medical-clinical	787	Hospital	110,917	80,520
Montana State University, Bozeman	Biological sciences	67	University	521,485	304,735
Do	Veterinary research	423	do	611,524	250,000
Do	Chemistry	1081	do	73,859	69,104
Do	Veterinary science	3036	do	88,875	88,120
Montana State University, Missoula	Health sciences	252	do	751,143	233,633

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
NEBRASKA (total).....				\$1,988,022	\$1,843,102
Creighton Memorial St. Joseph's Hospital, Omaha.....	Cardiology.....	1176	Hospital.....	\$30,528	\$30,528
Creighton University, Omaha.....	Basic medical research.....	882	Medical school.....	619,500	586,500
University of Nebraska, Omaha.....	Neuropsychiatric.....	230	do.....	200,000	199,559
Do.....	Cancer research.....	669	do.....	900,000	803,769
Do.....	Clinical research.....	523	do.....	179,835	164,687
University of Nebraska, Lincoln.....	Animal pathology and hygiene.....	626	College of agriculture.....	58,059	58,059
NEVADA (total).....				158,667	56,614
University of Nevada, Reno.....	Life sciences.....	786	University.....	158,667	56,614
NEW HAMPSHIRE (total).....				1,353,592	1,168,198
Dartmouth College, Hanover.....	Medical sciences research.....	276	Medical school.....	1,060,025	976,801
Do.....	Psychology.....	1008	College.....	24,272	24,272
University of New Hampshire, Durham.....	Life sciences research.....	363	University.....	252,170	160,000
Do.....	Microbiology.....	1019	do.....	17,125	17,125
NEW JERSEY (total).....				10,126,457	6,884,386
Fairleigh Dickinson University, Teaneck.....	Dental research.....	107	Dental school.....	32,500	32,458
New Jersey College of Medicine & Dentistry, Jersey City.....	Basic sciences research.....	388	College of medicine and dentistry.....	184,256	141,200
New Jersey State Department of Health, Trenton.....	Public health research.....	997	State institution.....	217,670	217,670
Newark Beth Israel Hospital, Newark.....	Basic medical and clinical research.....	241	Hospital.....	13,360	7,600
Princeton University, Princeton.....	Biological sciences research.....	289	University.....	1,101,246	601,481
Do.....	Chemistry.....	1091	do.....	728,384	274,937
Rutgers, the State University, New Brunswick.....	Biological research.....	141	do.....	1,000,000	450,890
Do.....	Radiation biology.....	1007	do.....	139,074	132,136
Do.....	Alcohol studies.....	1025	do.....	366,545	327,538
Do.....	Chemistry and bacteriology.....	322	do.....	19,765	19,765
Do.....	Entomology research.....	970	do.....	8,425	8,275
Do.....	Sanitary engineering.....	381	do.....	4,079	4,079
Do.....	Psychology and nutrition.....	817	do.....	261,282	177,171
Do.....	Radiobiology.....	594	do.....	25,000	25,000
Do.....	Pharmacy.....	767	College of pharmacy.....	16,246	15,467
Do.....	Sanitary engineering.....	714	College of engineering.....	61,838	48,963
Do.....	Psychopharmacology.....	859	University.....	19,985	19,837
Do.....	Basic and medical research.....	J084	Medical school.....	4,059,959	3,850,000
South Jersey Medical Research Foundation, Camden.....	Tissue culture research.....	408	Research foundation.....	24,100	5,000
Do.....	Cell research.....	3044	do.....	92,574	92,574
Do.....	Biomedical research.....	3158	do.....	281,041	271,000
St. Barnabas Medical Center, Newark.....	Medical research.....	383	Hospital at Livingston.....	1,143,916	50,000

State of New Jersey, Department Institute & Agencies (E. R. Johnstone Training & Research Center, Borden- town.)	Mental retardation.....	3037	Research center.....	315,300	101,373
Vineland State School, Vineland.....	Mental health research.....	347	Institute for the mentally retarded.....	9,972	9,972
NEW MEXICO (total).....				2,163,775	2,146,602
Lovelace Foundation, Albuquerque.....	Basic medical and clinical research.....	174	Medical research foundation.....	181,550	166,242
Do.....	do.....	1033	do.....	466,518	466,478
New Mexico College of Agriculture & Mechanical Arts, University Park.....	Sanitary engineering.....	370	College.....	22,500	20,675
New Mexico Highlands University, Las Vegas.....	Medicinal chemistry.....	58	University.....	150,000	150,000
University of New Mexico, Albuquerque.....	Medicinal chemistry.....	380	do.....	21,238	21,238
Do.....	Basic sciences.....	3030	Medical school.....	1,321,969	1,321,969
NEW YORK (total).....				70,267,251	55,097,037
Adelphi University, Garden City.....	Psychology.....	334	College.....	14,550	10,933
Albany Medical College of Union University, Albany.....	Medical research.....	6	Medical school.....	50,000	45,000
Do.....	do.....	565	do.....	1,354,728	1,343,674
The Animal Medical Center, New York.....	Veterinary medical research.....	619	Research institute.....	455,000	210,533
Astor Home for Children, Rhinebeck.....	Mental health research.....	515	Institute for emotionally dis- turbed children.....	81,576	78,695
Beth Israel Medical Center, New York.....	Medical research.....	511	Hospital.....	353,732	184,865
Brookdale Hospital Center, Brooklyn.....	do.....	627	do.....	214,952	204,844
Brooklyn Botanic Garden, Brooklyn (facility at Kitch- ewan).....	Chemical and biological research.....	184	Research institute.....	125,500	91,800
Buffalo Children's Hospital, Buffalo.....	Virology.....	149	Hospital.....	57,933	57,933
Buffalo General Hospital, Buffalo.....	Clinical research.....	980	do.....	30,000	30,000
Do.....	Medical research.....	1075	do.....	483,091	381,559
City of New York, Department of Hospitals (Metropoli- tan Hospital), New York.....	Psychiatry.....	3089	do.....	995,575	600,000
Columbia University College of Physicians & Surgeons, New York.....	Medical research.....	1	Medical school.....	400,000	399,346
Columbia University, New York.....	Biophysics and physiology.....	353	University.....	32,500	32,102
Do.....	Pharmaceutical research.....	982	Pharmacy.....	312,908	277,654
Do.....	Medical and nutritional research.....	585	Medical school.....	3,929,240	3,744,240
Do.....	Psychology.....	984	University.....	18,258	18,258
Cornell University, New York.....	Medical science research.....	256	Medical school.....	1,737,500	1,315,346
Do.....	Clinical research.....	3134	do.....	3,424,210	3,424,000
Cornell University, Ithaca.....	Disease-free animal research.....	102	Veterinary college.....	75,000	75,000
Do.....	Radiation biology.....	486	do.....	45,000	45,000
Do.....	Sanitary engineering.....	488	University.....	10,685	9,905
Do.....	Microbiological research.....	623	Veterinary college.....	137,500	45,325
Do.....	Molecular biology.....	1143	University.....	866,594	600,000
Eastman Dental Dispensary, Rochester.....	Basic science research.....	592	Research institute and clinic.....	8,327	5,786
Do.....	Dental research.....	956	do.....	264,588	254,666
Health Research, Inc., Buffalo (facility at West Seneca).....	Cancer and allied diseases.....	692	Research institute.....	281,415	243,172
Hospital for Joint Diseases, New York.....	Orthopedic research.....	760	Hospital.....	755,921	644,858
Hospital for Special Surgery, New York.....	Orthopedic surgery.....	54	do.....	807,634	343,281
Human Resources Foundation, Albertson.....	Rehabilitation research.....	697	Research and training center.....	195,748	195,748
Do.....	Rehabilitation.....	3159	do.....	195,245	185,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
NEW YORK—Continued					
Institute for the Crippled and Disabled, New York	Rehabilitation research	680	Rehabilitation center	\$159,255	\$159,255
Jewish Board of Guardians (Linden Hill School), Hawthorne	Child psychology	3073	Research institute	93,901	76,326
Jewish Chronic Disease Hospital, New York	Chronic disease research	117	Hospital	121,055	86,468
Jewish Hospital of Brooklyn, Brooklyn	Clinical research	74	do	566,845	288,825
Long Island Biological Association, Cold Spring Harbor	Biology	599	Research institute	70,000	70,000
Long Island Jewish Hospital, New Hyde Park, Long Island	Clinical research	744	Hospital	1,201,009	961,999
Long Island University, Brooklyn	Biology	472	University	18,505	18,505
Do	Biochemical research	773	do	21,924	17,600
Long Island University (C. W. Post College), Brookville	Psychological sciences	484	do	7,225	7,225
Do	do	595	do	5,900	3,515
Do	Clinical psychology research	3194	College	241,252	100,000
Maimonides Hospital of Brooklyn, Brooklyn	Clinical research	424	Hospital	573,491	569,792
Manhattan College, New York	Biological and sanitary engineering	3042	College	164,396	159,409
Mary Imogene Bassett Hospital, Cooperstown	Clinical research	243	Hospital	755,376	299,187
Do	Medical research	947	do	34,747	34,747
Do	Radiation research	638	do	20,000	20,000
Do	Disease-free animal research	874	do	34,963	32,869
Medical Foundation of Buffalo, Buffalo	Basic medical research	498	Research foundation	32,065	12,595
Do	do	777	do	209,762	157,457
Memorial Sloan-Kettering Cancer Center, N.Y.	Cancer and allied diseases	597	do	2,721,969	2,696,426
Memorial Sloan-Kettering Cancer Center, Rye	Cancer research	25	do	1,750,000	1,152,750
Millard Fillmore Hospital, Buffalo	Medical research	555	Hospital	160,620	60,000
Misericordia Hospital, Bronx	Medical and surgical research	257	do	156,404	40,000
Montefiore Hospital, Bronx	Research in chronic diseases	390	do	330,728	314,541
Do	Steroid research	823	do	630,274	453,057
Do	Medical research	3009	do	1,793,805	1,566,513
Mount Sinai Hospital, New York	Pathology	344	do	47,733	42,678
Do	Medical research	372	do	54,250	50,551
Do	Leukemia research	3070	do	184,100	97,258
New York Blood Center of Community Blood Council, New York	Blood research	3202	Research institute	905,000	865,000
New York, City of (the Public Health Research Institute, New York)	Public health research	161	do	1,617,500	550,000
New York Medical College Flower and Fifth Avenue Hospitals, New York	Medical and clinical research	842	Medical college	2,935,296	2,549,981
New York, State of (Department of Health), Roswell Park Memorial Institute, Buffalo	Cancer and allied diseases	21	Research institute	2,092,436	702,525
Do	Cell and virus research	1011	do	1,500,000	1,500,000
New York, State of (Department of Health), Albany	Air and water pollution	993	Research institute at Guilderland	312,429	306,492
New York, State of (Department of Mental Hygiene), New York	Psychiatry	279	do	66,000	66,000
New York, State of (Department of Mental Hygiene), Albany	do	917	Research Institute at Syracuse	19,200	16,915

New York, State of (Department of Mental Hygiene), Manhattan State Hospital, Wards Island.	Basic research in neurochemistry	661	Hospital	300,000	300,000
New York, State of (Department of Mental Hygiene), Rockland State Hospital, Orangeburg.	Mental health	278	do	350,000	240,603
Do.	do	3203	do	129,000	125,591
New York University, New York	Medical science research	323	Medical school	50,000	45,060
Do.	Basic and clinical medical research	329	do	1,655,000	1,632,680
Do.	Physical medicine and rehabilitation	3160	do	1,785,410	1,653,000
Do.	Environmental medicine research	1111	do	272,980	272,980
Do.	Clinical research	12	do	80,000	75,298
Do.	Dental research	656	College of dentistry	69,800	69,800
Do.	Mental health	3063	University	168,391	156,701
Rochester General Hospital, Rochester	Basic medical sciences	3279	Hospital	381,819	368,000
Rockefeller Institute for Medical Research, New York	do	9	Research institute	2,760,885	690,000
St. Clare's Hospital, New York	Medical research	136	Hospital	50,700	10,771
St. John's University, Jamaica	Biology and pharmacy	169	University	172,063	135,295
St. Joseph's Hospital, Syracuse	Pathology research	155	Hospital	7,306	7,306
St. Luke's Hospital, New York	Clinical research	361	do	44,161	44,161
Do.	Surgical research	899	do	82,574	45,067
Do.	Hematology and gastroenterology	986	do	58,063	58,066
Do.	Nutrition and metabolic diseases	3013	do	330,083	283,316
St. Vincent's Hospital, New York	Basic medical and clinical research	133	do	1,396,973	882,410
State University of New York at Buffalo, Buffalo	Nuclear research in medicine	294	University	250,000	250,000
Do.	Basic science research	57	Medical school	850,915	795,750
Do.	Health sciences	413	University	630,248	420,680
Do.	Dental research	973	Dental school	109,630	109,567
State University of New York (Upstate Medical Center), Syracuse	Medical research	538	Medical school	1,979,079	1,941,031
State University of New York (Downstate Medical Center), Brooklyn	Clinical research	542	do	2,587,500	2,520,000
State University of New York, College of Agriculture at Cornell, Ithaca	Pesticide residue research	171	College	20,000	18,767
Do.	Biological sciences	3018	College of agriculture	1,125,250	325,000
Staten Island Mental Health Society, Staten Island	Mental health	688	Psychiatric clinic	34,949	27,743
Syracuse University, Syracuse	Zoology research	439	University	23,626	23,626
Do.	Biological research	608	do	377,901	374,301
Do.	do	3276	do	959,896	825,000
Do.	Zoology	892	do	57,377	57,377
Trudeau Foundation, Saranac Lake	Pulmonary diseases	3200	Research foundation	522,869	514,212
University of Rochester, Rochester	Medical and dental research	131	Medical school	251,731	248,681
Do.	Medical science and radiobiology	3041	do	3,429,216	3,172,736
Do.	Surgery	1123	do	65,960	56,613
Waldemar Medical Research Foundation, Woodburg	Clinical research	790	Research foundation	325,000	271,945
Yeshiva University, Albert Einstein College of Medicine, Bronx	Clinical and basic medical research	104	Medical school	402,183	242,332
Do.	Medical research	754	do	6,043,238	3,885,597
Yeshiva University, New York	Biological and chemical research	445	University	86,150	50,000
Do.	Obstetrics, gynecology, and pediatrics	3400	Medical school	665,000	665,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
NORTH CAROLINA (total)-----				\$11,351,690	\$10,016,664
The Agricultural and Technical College of North Carolina, Greensboro.	Biochemistry-----	901	Technical college-----	88,076	88,076
Bowman Gray Medical School of Wake Forest College, Winston-Salem.	Clinical and medical sciences research.	59	Medical school-----	1,212,563	1,062,325
Do-----	Vivarium-----	1117	do-----	177,037	176,044
Duke University, Durham	Medical research-----	82	do-----	105,000	105,000
Do-----	do-----	3118	do-----	915,000	749,534
Do-----	Basic medical research-----	238	do-----	287,500	215,000
Do-----	Medical sciences-----	3096	do-----	77,482	77,482
Do-----	Life sciences-----	298	University-----	234,500	234,500
Do-----	Geriatric research-----	367	Medical school-----	522,373	408,628
Do-----	Clinical research-----	705	do-----	845,869	814,026
Do-----	Medical sciences-----	1071	do-----	2,668,612	2,635,823
North Carolina State University at Raleigh	Genetics-----	600	University-----	20,000	20,000
Do-----	Animal research-----	810	do-----	51,315	51,005
Do-----	Nutritional research-----	795	do-----	401,839	200,920
Do-----	Biological research-----	936	do-----	653,320	443,125
University of North Carolina, Chapel Hill	Pathology-----	268	Medical school-----	39,325	39,325
University of North Carolina, Chapel Hill (North Carolina Memorial Hospital).	Clinical research-----	3153	do-----	301,320	301,320
University of North Carolina, Chapel Hill	Dental research-----	992	Dental school-----	492,160	492,160
Do-----	Pharmacy-----	401	School of pharmacy-----	117,020	50,184
Do-----	Research in basic sciences-----	387	Medical school-----	536,820	536,820
Do-----	Psychophysiology and biochemistry-----	3175	do-----	54,382	53,479
Do-----	Public health research-----	483	School of public health-----	790,494	726,001
Do-----	Biological research-----	712	University-----	395,843	306,510
Do-----	Zoology research-----	966	do-----	298,494	192,377
Wrightsville Pediatric Research Institute, Wilmington.	Pediatrics-----	825	Research institute-----	65,141	40,000
NORTH DAKOTA (total)-----				796,624	462,496
North Dakota State University, Fargo	Pharmacy-----	143	School of pharmacy-----	125,417	125,417
Do-----	Biochemical research-----	743	University-----	5,575	5,575
Do-----	Bacteriology-----	932	do-----	4,794	4,647
Do-----	Chemistry-----	1115	do-----	335,362	168,640
University of North Dakota, Grand Forks	Biochemical research-----	271	Medical school-----	95,000	74,190
Do-----	Health related chemistry-----	655	University-----	230,476	84,027
OHIO (total)-----				20,869,312	15,206,910
Case Institute of Technology, Cleveland	Sanitary engineering-----	622	Technical college-----	67,328	25,000
Children's Hospital, Cincinnati	Pediatric research-----	275	Hospital-----	348,247	325,037
Do-----	Human development research-----	1111	do-----	356,105	356,000

Children's Hospital, Columbus.....	Pediatric research.....	261	do.....	875,000	179,184
Cincinnati General Hospital, Cincinnati.....	Basic medical and clinical research.....	749	do.....	157,577	157,577
Cleveland Clinic Foundation, Cleveland.....	Medical research.....	654	Research institute.....	155,981	118,033
Cleveland Metropolitan General Hospital, Cleveland.....	Basic medical and clinical research.....	646	Hospital.....	420,000	349,543
Do.....	Pathology.....	3278	do.....	878,274	768,900
Elizabeth Gamble Deaconess Home Association, Cincinnati.....	Medical research.....	7	Research institute.....	206,500	195,025
Do.....	do.....	852	do.....	137,500	137,500
Fels Research Institute, Yellow Springs.....	Psychophysiological research.....	247	do.....	97,912	97,912
Do.....	Human behavior.....	1092	do.....	19,877	14,943
Do.....	Psychology.....	3252	do.....	347,718	307,000
Do.....	Nutrition and metabolism.....	782	Hospital.....	66,054	17,848
Highland View Hospital, Cleveland.....	Metabolic research.....	229	do.....	94,540	83,766
Do.....	Medical and surgical research.....	1018	Research institute.....	37,500	37,500
The Jewish Hospital (May Institute for Medical Research), Cincinnati.....	do.....	1103	do.....	38,012	38,012
Do.....	Bacteriology research.....	437	University.....	330,975	215,534
Miami University, Oxford.....	Basic sciences research.....	678	College.....	376,653	77,628
Oberlin College, Oberlin.....	Veterinary science.....	219	Experiment station.....	90,000	90,000
Ohio Agricultural Experiment Station, Wooster.....	Rehabilitation research.....	5	Rehabilitation center.....	139,800	59,614
The Ohio Rehabilitation Center, Columbus.....	Dental research.....	18	Dental school.....	290,000	290,000
Ohio State University, Columbus.....	Medical research.....	613	Medical school.....	2,460,347	1,133,573
Do.....	Human Physiology.....	614	University.....	12,000	8,850
Do.....	Vision.....	659	do.....	75,932	75,932
Do.....	Optometry.....	590	do.....	100,000	32,900
Do.....	Animal physiology.....	411	do.....	62,608	13,450
Do.....	Water pollution.....	321	do.....	90,500	90,500
Ohio State University, Columbus (Columbus Psychiatric Institute and Hospital).....	Psychiatry.....	3197	do.....	707,218	299,775
Ohio State University, Columbus.....	Psychology.....	551	do.....	20,000	20,000
Do.....	Veterinary pathology.....	888	College of veterinary medicine.....	350,000	350,000
Do.....	Pharmaceutical research.....	3188	College of pharmacy.....	681,722	353,765
Do.....	Preventive medicine and animal research.....	938	Medical school.....	964,025	901,525
Ohio Wesleyan University, Delaware.....	Biology.....	475	University.....	134,452	89,634
St. Luke's Hospital Association, Cleveland.....	Medical-clinical research.....	299	Hospital.....	35,000	32,675
St. Vincent Charity Hospital, Cleveland.....	Medical-surgical research.....	884	do.....	460,532	213,646
University of Cincinnati, Cincinnati.....	Environmental medicine and industrial health.....	23	Medical school.....	483,490	483,490
Do.....	Medical research.....	1032	do.....	879,436	857,821
Do.....	Sanitary engineering.....	1106	University.....	8,800	7,921
Do.....	Cardiovascular research.....	3002	Medical school.....	175,217	175,217
Do.....	Radiology.....	3152	do.....	41,450	41,450
University Hospitals of Cleveland, Cleveland.....	do.....	140	Hospital.....	392,971	266,562
Western Reserve University, Cleveland.....	Surgical research.....	192	Medical school.....	15,000	5,799
Do.....	Pathology and basic medical research.....	3176	do.....	1,216,200	1,171,901
Do.....	Surgery.....	427	do.....	1,731,513	1,500,000
Do.....	Behavioral sciences research.....	589	University.....	10,358	10,051
Do.....	Life sciences.....	191	do.....	1,390,656	400,000
Western Reserve University and University Hospitals of Cleveland, Cleveland.....	Medical and clinical research.....	J014	Medical school.....	2,155,867	2,047,217
Western Reserve University, Cleveland.....	Dental research.....	J014	School of dentistry.....	682,467	681,700

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
OKLAHOMA (total)				\$2,967,835	\$2,224,686
Oklahoma Medical Research Foundation, Oklahoma City	Clinical research	883	Research foundation	103,949	100,041
Oklahoma State University of Agriculture & Applied Science, Stillwater	Chemical research	214	University	22,500	9,975
Do	Life sciences research	349	do	250,000	150,000
Do	Veterinary	807	College of veterinary medicine	1,129,240	855,945
Do	Biochemistry	889	University	189,133	145,619
Do	Hemophilia	3101	College of veterinary medicine	50,000	50,000
Panhandle Agricultural & Mechanical College, Goodwell	Biology	496	College	4,513	4,513
University of Oklahoma, Oklahoma City	Basic medical and clinical research	84	Medical school	565,000	504,329
University of Oklahoma, Norman	Life sciences research	481	University	50,000	48,225
Do	Sanitary science research	738	do	29,839	29,839
Do	Botany and microbiology	1112	do	573,661	326,200
OREGON (total)				3,558,228	3,490,679
Good Samaritan Hospital, Portland	Basic medical and clinical research	469	Hospital	14,882	11,775
Linfield Research Institute, McMinnville	Radio biological research	447	Research institute	25,000	25,000
Medical Research Foundation of Oregon, Beaverton	Primate biology	3120	Research foundation	52,528	52,000
Oregon State University, Corvallis	Life sciences	170	University	521,941	497,569
Do	Health sciences	834	do	189,582	177,640
Do	Entomology, botany, and plant pathology	3247	do	190,519	190,000
Do	Pharmacy	824	School of pharmacy	121,268	121,268
Portland State College, Portland	Research in environmental health	994	College	441,184	426,690
Providence Hospital, Portland	Medical and clinical research	454	Hospital	18,138	8,870
Reed College, Portland	Biological research	250	College	133,165	133,165
Do	Medicinal chemistry	474	do	47,529	47,529
University of Oregon, Portland	Medical science research	354	Medical school	1,297,955	1,297,955
Do	Dental research	405	Dental school	9,877	9,877
Do	do	482	do	71,900	71,900
Do	Medical research	3171	Medical school	47,134	47,000
University of Oregon, Eugene	Biochemistry, biology, and molecular biology	448	University	307,666	304,941
Do	Psychology	3191	do	67,960	67,500
PENNSYLVANIA (total)				24,081,819	19,423,052
Albert Einstein Medical Center, Philadelphia	Medical-clinical research	325	Hospital	328,900	300,459
Do	do	3227	do	686,390	610,128
Do	Basic medical and clinical research	3253	do	264,293	264,250
Bryn Mawr College, Bryn Mawr	Biology research	40	College	339,781	314,157
Carnegie Institute of Technology, Pittsburgh	Psychology	1108	Research institute	45,300	45,300

Children's Hospital of Philadelphia, Philadelphia	Pediatric research	794	Hospital	8,164	7,369
Children's Hospital of Pittsburgh, Pittsburgh	do	227	do	104,634	20,171
Donald Guthrie Foundation, Sayre	Medical research	497	Research foundation	10,000	8,176
Eastern Pennsylvania Psychiatric Institute, Philadelphia	Psychiatry	742	Research institute	151,202	100,909
Elwyn Training School, Elwyn	Mental health	290	Institute for the mentally retarded	44,000	25,000
Eye and Ear Hospital of Pittsburgh, Pittsburgh	Eye and ear research	425	Hospital	285,916	108,767
Hahnemann Medical College & Hospital, Philadelphia	Clinical research	362	Medical college	1,106,912	1,094,194
Haverford College, Haverford	Life sciences	929	College	120,006	99,494
Home for Jewish Aged, Philadelphia	Geriatrics research	176	Institute for the aged	9,488	6,750
Institute for Cancer Research, Philadelphia	Cancer research	3031	Research institute	1,125,900	750,000
Jefferson Medical College of Philadelphia, Philadelphia	Biochemistry	119	Medical school	30,755	30,749
Do	Psychiatry	120	do	22,235	22,235
Do	Surgery	121	do	51,883	51,883
Do	Blood and plasma fractionation	122	do	24,572	24,572
Do	Radiology	1017	do	214,832	165,035
Lankenau Hospital, Philadelphia	Metabolic research	1169	Hospital	37,536	26,489
Lankenau Hospital, Philadelphia (facility at Downingtown)	do	3143	do	96,435	78,755
LaSalle College, Philadelphia	Health sciences	545	College	13,815	8,497
Magee's Women's Hospital, Pittsburgh	Obstetrics, gynecology, and pediatrics	210	Hospital	564,768	210,246
Do	do	1076	do	232,512	232,512
Montefiore Hospital, Pittsburgh	Clinical research	3189	do	549,131	360,000
Moore School of Electrical Engineering, Philadelphia	Electromedical research	180	Engineering school	58,000	58,000
Do	Biomedical engineering	3224	do	257,341	257,000
Pennsylvania State University, University Park	Sanitary engineering	765	University	9,908	9,671
Do	Life sciences	908	do	831,698	750,483
Do	Air environmental studies	3209	School of engineering	186,284	173,000
Pennsylvania State Department of Health (Henry R. Landis State Hospital), Philadelphia	Medical and clinical research	833	State hospital	259,490	110,915
Philadelphia General Hospital, Philadelphia	Cardiovascular research	239	Hospital	50,000	49,263
Philadelphia Psychiatric Hospital, Philadelphia	Mental health	561	do	46,281	45,114
Presbyterian Hospital, Philadelphia	Medical science research	463	do	413,250	255,727
St. Christopher's Hospital, Philadelphia	Pediatric research	871	do	301,758	252,987
Skin & Cancer Hospital of Philadelphia, Philadelphia	Dermatology	1174	do	466,681	404,482
Swarthmore College, Swarthmore	Biology	752	College	81,000	80,886
Temple University, Philadelphia	Medical research	628	Medical school	2,407,500	1,528,029
University of Pennsylvania, Philadelphia	Pharmacology	295	do	85,879	77,924
Do	Radiological research	8	do	325,621	212,254
Do	Biochemistry	3127	do	147,560	147,560
Do	Medical research	62	do	2,181,891	1,730,095
Do	Dental research	83	School of dental medicine	155,350	146,109
Do	Basic dental sciences	J066	do	1,443,900	1,443,900
Do	Biology	3122	University	517,808	517,808
Do	Dermatology	828	Medical school	79,824	79,824
Do	Psychology	906	University	700,000	436,000
Do	Veterinary medicine	950	Veterinary school	507,198	491,424
Do	Basic and clinical research	374	Medical school	124,600	124,600
Do	Environmental research	536	do	29,629	29,629
Do	Biochemistry	969	do	72,848	72,848
Do	Microbiology	3035	do	2,095,069	1,979,500
Do	Hyperbaric facility for research in respiration and circulation	3133	do	207,225	204,000

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
PENNSYLVANIA—Continued					
University of Pittsburgh, Pittsburgh	Public health research	27	School of public health	\$180,000	\$82,920
Do.	Basic medical research	75	Medical school	686,812	582,454
Do.	Rheumatological and orthopedic	610	do.	82,523	64,085
Do.	Anesthesiology	1094	do.	62,880	62,016
Do.	Surgery	1095	do.	46,247	40,393
Do.	Physiology	981	do.	68,000	67,611
Do.	Radiation	3116	do.	472,985	343,000
Do.	Life sciences	116	University	57,456	57,456
Do.	Dentistry and pharmacy	3034	Schools of dentistry and pharmacy	432,426	432,426
Wills Eye Hospital, Philadelphia	Ophthalmology	165	Hospital	100,000	94,700
Wistar Institute of Anatomy & Biology, Philadelphia	Basic biological research	244	Research institute	205,974	205,974
Woman's Medical College of Pennsylvania, Philadelphia	Medical research	52	Medical school	948,658	546,038
The Woods School, Langhorne	Child study and research	38	Research center	182,315	176,250
Zoological Society of Philadelphia (Penrose Research Laboratory), Philadelphia	Pathology	811	Research laboratory	32,600	32,600
PUERTO RICO (total)				68,004	68,004
University of Puerto Rico, Rio Piedras	Basic medical research	677	Medical school	68,004	68,004
RHODE ISLAND (total)				4,159,021	3,273,801
Brown University, Providence	Psychology research	2	University	433,557	430,015
Do.	Biology	477	do.	26,384	26,083
Do.	do.	539	do.	565,070	521,600
Do.	Psychology	1125	do.	111,075	105,686
Do.	Medical sciences	3069	do.	385,800	384,785
Do.	Biomedical research	1085	Medical school	1,210,519	1,110,500
Providence College, Providence	Basic medical research	801	College	122,736	122,736
Rhode Island Hospital, Providence	Cancer research	153	Hospital	162,643	25,000
Do.	do.	904	do.	116,795	110,627
University of Rhode Island, Kingston	Biology	637	University	14,000	13,876
Do.	Pharmacy	3074	School of pharmacy	935,614	348,065
Do.	Sanitary engineering	905	University	74,828	74,828
SOUTH CAROLINA (total)				576,172	558,484
Clemson University, Clemson	Food technology and nutrition	521	School of agriculture	19,889	9,446
Medical College of South Carolina, Charleston	Basic medical and clinical research	671	Medical school	556,283	549,038

SOUTH DAKOTA (total).....				300,123	174,157
South Dakota State College, Brookings.....	Pharmacy.....	788	College of pharmacy.....	173,595	50,326
State University of South Dakota, Vermillion.....	Basic medical sciences.....	420	Medical school.....	126,528	123,831
TENNESSEE (total).....				5,326,914	4,156,712
Baptist Memorial Hospital, Memphis.....	Cardiovascular research.....	371	Hospital.....	56,021	34,326
Meharry Medical College, Nashville.....	Basic medical research.....	320	Medical school.....	220,636	196,776
St. Jude Hospital, Memphis.....	Pediatrics.....	1130	Hospital.....	513,225	274,440
Tennessee Department of Mental Health (Clover Bottom Hospital School), Nashville (facility at Donelson).....	Basic medical research.....	941	do.....	16,497	15,897
University of Tennessee, Memphis.....	Research in pharmacy.....	326	School of pharmacy.....	7,500	5,603
University of Tennessee and City of Memphis Hospital, Memphis.....	Radiological research.....	407	Medical school.....	300,146	144,422
University of Tennessee, Memphis.....	Dentistry and pharmacy.....	409	Dental school and pharmacy school.....	642,357	325,000
University of Tennessee, Knoxville.....	Clinical research.....	922	University.....	480,714	480,714
University of Tennessee and City of Memphis Hospitals, Memphis.....	Medical science.....	999	Medical school.....	1,021,353	1,021,353
Vanderbilt University, Nashville.....	Medical research.....	76	do.....	215,020	209,285
Do.....	do.....	204	do.....	111,647	98,171
Do.....	Endocrinology, pediatrics, cardiology, and genetics.....	533	do.....	32,000	16,102
Do.....	Medical research.....	318	do.....	990,000	700,000
Do.....	Medical and clinical research.....	1046	do.....	254,268	222,861
Do.....	Physiology.....	541	do.....	18,046	17,016
Do.....	Sanitary engineering.....	943	University.....	33,073	21,675
Do.....	Pharmacology.....	1139	Medical school.....	296,340	255,000
Do.....	Obstetrics and gynecology.....	1144	do.....	118,071	118,071
TEXAS (total).....				13,737,587	11,712,485
Agricultural & Mechanical College of Texas, College Station.....	Plant pathology and air pollution.....	818	College.....	70,612	45,000
Board for Texas State Hospitals and Special Schools (Houston State Psychiatric Institute), Houston.....	Psychiatry.....	584	Hospital.....	87,291	87,291
Do.....	do.....	3124	do.....	233,249	233,249
Children's Medical Center, Dallas.....	Pediatric cancer.....	3005	do.....	132,141	82,525
The Driscoll Foundation, Corpus Christi.....	Nutritional research.....	1148	Research foundation.....	14,118	14,118
Methodist Hospital, Houston.....	Cardiovascular research.....	3199	Hospital.....	2,161,203	1,960,000
Scott & White Memorial Hospital (Scott, Sherwood & Brindley Foundation), Temple.....	Clinical research.....	867	do.....	186,148	123,001
Southwest Foundation for Research and Education, San Antonio.....	Basic medical sciences.....	13	Research foundation.....	772,619	332,773
Do.....	Primate research.....	1177	do.....	47,400	47,400
Do.....	Medical and primate research.....	3210	do.....	864,053	796,500
Texas Medical Center, Inc., Houston.....	Medical sciences research.....	570	Medical school.....	3,074,134	3,072,699

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
TEXAS—Continued					
University of Houston, Houston	Pharmacy research	208	University	\$6,754	\$3,062
Do	Biology research	465	do	19,075	17,109
University of Texas, Austin	Biochemical research	118	do	100,000	100,000
Do	Sanitary engineering	491	do	4,000	2,770
Do	Biological sciences research	3059	do	425,000	425,000
Do	Zoology	745	do	94,078	82,100
University of Texas, Port Aransas	Research in environmental health	675	do	200,000	104,797
University of Texas, Dallas	Medical and clinical research	851	Southwestern medical school	1,269,584	1,269,584
University of Texas, M. D. Anderson Hospital & Tumor Institute, Houston	Cancer research	3117	Hospital	2,840,968	1,889,748
University of Texas Medical Branch, Galveston	Basic medical research	802	Medical school	281,832	281,832
Do	Medical research	1077	do	345,000	288,927
William Marsh Rice University, Houston	Biology	126	University	50,000	50,000
Do	Biological research	3211	do	458,328	403,000
UTAH (total)				5,902,280	4,882,494
Holy Cross Hospital, Salt Lake City	Basic medical sciences	100	Hospital	144,555	25,000
University of Utah, Salt Lake City	Medical sciences	125	Medical school	2,883,241	2,422,709
Do	Medical research	3164	do	760,857	709,582
Do	Pharmaceutical research	761	College of pharmacy	253,679	133,177
Do	Biological sciences	830	University	1,007,405	857,000
Do	Chemistry	832	do	265,302	200,000
Utah State University, Logan	Animal metabolism and nutrition	63	do	26,157	26,157
Do	Biological sciences	835	do	311,084	258,869
Do	Water research	3155	do	250,000	250,000
VERMONT (total)				3,921,059	3,302,081
Degoesbriand Memorial Hospital, Burlington	Physiology and cardiovascular research	307	Hospital	157,000	96,475
Mary Fletcher Hospital, Burlington	Clinical research	J104	do	262,186	241,500
University of Vermont, Burlington	Medical and clinical research	50	Medical school	619,000	495,639
Do	Psychology	567	University	6,000	6,000
Do	Pathological research	702	Medical school	722,500	708,361
Do	Medical research	J078	do	2,154,373	1,754,106
VIRGINIA (total)				5,079,937	4,947,685
Medical College of Virginia, Richmond	Medical sciences research	105	Medical school	170,123	170,123
Do	Surgical research	505	do	110,000	110,000
Do	Medical research	3125	do	126,973	115,000

Do.....	Basic medical and surgical research.....	639	do.....	1,833,449	1,768,507
Do.....	Biochemistry.....	3138	do.....	126,992	100,000
University of Virginia, Charlottesville.....	Medical research.....	280	do.....	290,776	273,670
Do.....	Biology-psychology.....	3024	University.....	951,440	951,440
Do.....	Chemistry.....	1070	do.....	1,045,959	1,048,000
Virginia Fisheries Laboratory, Gloucester Point.....	Microbiology-pathology.....	836	Research center.....	37,625	27,345
Virginia Polytechnic Institute, Blacksburg.....	Microbiology, biochemistry, and nutrition.....	426	Technical college.....	383,600	383,600
WASHINGTON (total).....				7,489,313	6,570,919
Children's Orthopedic Hospital, Seattle.....	Medical research.....	769	Hospital.....	33,088	19,776
Gonzaga University, Spokane.....	Basic medical research.....	604	University.....	208,890	25,000
King County Hospital, Seattle.....	Clinical research.....	1131	Hospital.....	142,779	142,779
Pacific Lutheran University, Tacoma.....	Biochemical research.....	1026	University.....	7,790	7,710
Pacific Northwestern Research Foundation, Seattle.....	Medical research.....	897	Research foundation.....	266,320	179,320
University of Washington, Seattle.....	Psychology research.....	93	University.....	167,832	167,832
Do.....	Mental health research.....	3401	Medical school.....	365,000	340,000
Do.....	Basic medical research.....	111	do.....	155,000	153,255
Do.....	Dental research.....	254	Dental school.....	50,000	48,454
Do.....	Research in health sciences.....	355	Medical school.....	425,000	422,681
Do.....	Biochemistry and genetics.....	3076	do.....	2,650,000	2,484,320
Do.....	Clinical research.....	3109	do.....	315,356	315,356
Do.....	Preventive medicine.....	3055	do.....	1,250,000	1,157,260
Virginia Mason Foundation for Medical Education Research, Seattle.....	Biochemical-physiological research.....	3105	Foundation.....	40,602	31,111
Washington State University, Pullman.....	Air pollution.....	221	University.....	22,332	13,869
Do.....	Biochemical research.....	228	do.....	29,925	5,637
Do.....	Veterinary research.....	233	College of veterinary medicine.....	100,000	91,656
Do.....	Biological research.....	414	University.....	18,100	18,100
Do.....	Biochemistry.....	416	do.....	370,000	205,400
Do.....	Biological sciences.....	415	do.....	413,792	408,998
Do.....	Pesticide research.....	417	do.....	131,500	65,000
Do.....	Sanitary engineering.....	556	do.....	71,954	58,652
Do.....	Veterinary science.....	766	College of veterinary medicine.....	13,435	13,435
Do.....	Veterinary.....	1082	do.....	30,383	29,379
Do.....	Viral and rickettsial diseases.....	1118	do.....	7,000	7,000
Washington State University, Pullman (facility at Prosser).....	Entomology.....	1061	University.....	96,835	60,000
Washington State University, Pullman.....	Psychology.....	1171	do.....	106,400	98,939
WEST VIRGINIA (total).....				615,716	266,316
Beckley Appalachian Regional Hospital, Beckley.....	Clinical research.....	373	Hospital.....	89,000	79,775
West Virginia University, Morgantown.....	Basic Medical Research.....	525	Medical school.....	56,328	54,850
Do.....	Basic medical sciences.....	55	do.....	437,324	108,904
Do.....	Medical research.....	337	do.....	33,064	22,787

Projects awarded under health research facilities program, title VII-A, July 30, 1956-Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of institution	Amount requested	Amount awarded
WISCONSIN (total).....				\$10,734,945	\$7,355,227
Central Wisconsin Colony & Training School, Madison....	Mental health research.....	359	Research and training center in mental health.	467,030	161,260
Lawrence College, Appleton.....	Biological research.....	518	College.....	2,200	2,183
Madison General Hospital Medical & Surgical Foundation, Inc., Madison.	Medical research.....	736	Research foundation.....	9,798	3,233
Marquette University, Milwaukee.....	Biological research.....	152	University.....	822,414	285,980
Do.....	Dental research.....	253	Dental school.....	37,627	21,268
Do.....	Medical research.....	357	Medical school.....	118,380	118,380
Do.....	do.....	870	do.....	84,422	84,422
Do.....	Medical research (surgery).....	1133	do.....	53,423	15,550
Do.....	Pharmacology and pathology.....	1126	do.....	79,034	59,708
Do.....	Medical sciences.....	3129	do.....	336,213	260,000
University of Wisconsin, Madison.....	do.....	10	do.....	1,005,000	1,005,000
Do.....	Mental retardation.....	945	do.....	110,000	110,000
Do.....	Cancer and mental retardation.....	3273	do.....	175,000	175,000
Do.....	Pharmaceutical chemistry.....	1086	School of pharmacy.....	137,074	137,074
Do.....	Biochemical research.....	259	University.....	300,000	300,000
Do.....	Diseases of animals.....	3071	do.....	328,560	328,560
Do.....	do.....	985	do.....	41,695	30,620
Do.....	Biophysics.....	1090	do.....	500,000	500,000
Do.....	Chemistry and pharmacy.....	441	do.....	695,750	497,500
Do.....	Entomology.....	987	do.....	677,481	200,000
Do.....	Psychology.....	558	do.....	20,000	20,000
Do.....	Veterinary science research.....	579	do.....	833,844	690,731
Do.....	Genetics.....	673	do.....	850,000	615,976
Do.....	Zoology.....	700	do.....	750,000	381,501
Do.....	Psychology.....	775	do.....	800,000	351,281
Do.....	Environmental research.....	1080	do.....	1,500,000	1,000,000
WYOMING (total).....				60,485	51,759
University of Wyoming, Laramie.....	Veterinary research.....	217	University.....	60,485	51,759

APPENDIX II

Formal title VII-A, health research facilities applications now pending Council action as of Dec. 31, 1965

Applicant	Type of institution	Discipline	Request
ALABAMA (State total, \$1,149,378):			
Auburn University, Auburn	University	Veterinary research	\$829, 278
University of Alabama Medical Center, Birmingham	do.	Research computer facility	320, 100
CALIFORNIA (State total, \$2,196,384):			
University of California, Los Angeles	do.	Reed Neurological Research Center	1, 000, 000
Do.	do.	UCLA School of Medicine	656, 689
University of Southern California, Los Angeles	do.	Medical school	539, 795
COLORADO (State total, \$2,223,905):			
University of Colorado, Boulder	do.	Psychology and biology laboratory	2, 223, 905
CONNECTICUT (State total, \$6,293,817):			
University of Connecticut, Farmington	do.	Schools of medicine and dentistry	6, 293, 817
ILLINOIS (State total, \$1,590,077):			
Chicago Medical School, Chicago	Medical school	Medical research	1, 550, 000
University of Chicago, Chicago	University	Pediatric research	40, 077
INDIANA (State total, \$240,128):			
Indiana University, Bloomington	do.	Speech and hearing center	240, 128
KANSAS (State total, \$912,504):			
Kansas State University of Agriculture & Applied Sciences, Manhattan.	do.	Biological science building	912, 504
MASSACHUSETTS (State total, \$3,054,471):			
Beth Israel Hospital, Boston	Hospital	New research wing	1, 700, 105
Harvard College, Boston	College	School of dentistry	1, 248, 844
Medfield Foundation, Inc., Medfield	Foundation	Mental health research building	105, 522
MINNESOTA (State total, \$652,941):			
Northwestern Hospital, Minneapolis	Hospital	Research facility	227, 350
The Swedish Hospital, Minneapolis	do.	Research unit	177, 091
University of Minnesota, Dental School, Minneapolis	University	Dental research and human genetics facility	248, 500
MISSOURI (State total, \$1,577,443):			
Cancer Research Center, Columbia	Research center	Laboratory building for animal, biochemical, and statistical research.	381, 759
St. Mary's Hospital, St. Louis	Hospital	Medical research laboratories	72, 245
University of Missouri, Columbia	University	Genetics laboratory	472, 035
University of Missouri School of Medicine, Columbia	do.	Clinical research and program evaluation centers.	256, 000
Washington University School of Medicine, St. Louis	do.	Remodeling of department of biological chemistry.	395, 404
NEW JERSEY (State total, \$1,337,342):			
Rutgers, the State University, Newark	do.	Institute of animal behavior	708, 735
St. Barnabas Medical Center, Livingston	Medical center	Research facility project	628, 607
NEW YORK (State total, \$7,987,134):			
Albert Einstein College of Medicine (Yeshiva University), New York	University	Movable equipment	370, 100
Do.	do.	Educational center for health sciences	273, 140
Columbia University, College of Physicians & Surgeons, New York	do.	Animal care facility	264, 219
Health Research, Inc., Roswell Park Division, Buffalo	Research institute	Chemotherapy and pharmacology building	2, 733, 479

Formal title VII-A, health research facilities applications now pending Council action as of Dec. 31, 1965—Continued

Applicant	Type of institution	Discipline	Request
NEW YORK—Continued			
Isaac Albert Research Institute of the Jewish Chronic Disease Hospital, Brooklyn.	Hospital	Addition to existing laboratory building	\$484,684
Maimonides Hospital of Brooklyn and the Department of Hospitals of the city of New York, Brooklyn.	do.	Research facility, Coney Island Hospital Division.	414,935
Medical Foundation of Buffalo, Inc., Buffalo.	Medical foundation	Building for animal quarters and laboratories	43,780
Memorial Hospital for Cancer & Allied Diseases, New York	Hospital	Reconstruction of Howard Laboratory Building	1,708,991
St. John's University, Jamaica	University	Conversion of temporary classrooms to laboratories.	171,144
University of Rochester, Rochester	do.	Schools of medicine and dentistry	1,522,662
NORTH CAROLINA (State total, \$2,138,389):			
Bowman-Gray School of Medicine of the Wake Forest College, Winston-Salem.	College	School of medicine	1,137,292
Duke University School of Medicine, Durham	University	Reproduction and perinatal research laboratories.	49,801
North Carolina Baptist Hospitals, Inc., Winston-Salem	Hospital	North Carolina Baptist Hospital	101,681
University of North Carolina at Chapel Hill	University	Research facility, department of city and regional planning.	63,110
Do.	do.	Mental retardation research center	88,232
Do.	do.	School of medicine and dentistry	698,273
OHIO (State total, \$300,000):			
Ohio University, Athens	do.	Science research building	300,000
OREGON (State total, \$1,858,350):			
Medical Research Foundation of Oregon, Portland	Research foundation	Reproductive biology facility and Oregon Regional Primate Research Center.	1,819,350
Reed Institute, Portland	Institute	Nuclear Research reactor laboratory	39,000
PENNSYLVANIA (State total, \$499,114):			
University of Pennsylvania, Philadelphia	University	Biochemistry renovations, No. 2	170,500
University of Pittsburgh, School of Medicine, Pittsburgh.	do.	Central animal facilities	202,923
Do.	do.	Research center for child psychiatry	125,691
TEXAS (State total, \$2,055,023):			
Callier Hearing & Speech Center, Dallas	Hearing and speech center	Research division	478,652
University of Texas Medical Branch, Galveston	University	Animal branch	260,482
Do.	do.	Basic sciences building	810,242
Do.	do.	Clinical sciences building	505,647
UTAH (State total, \$1,063,140):			
Utah State University, Logan	do.	Veterinary science and bacteriology building	570,000
Do.	do.	Chemistry building for research	261,168
University of Utah, College of Medicine, Salt Lake City	do.	Remodeling of existing cancer research building	231,972
VIRGINIA (State total, \$376,874):			
Virginia Polytechnic Institute, Blacksburg	Polytechnic institute	VPI National Laboratory for Anaerobic Bacteriology.	376,874
WISCONSIN (State total, \$1,332,000):			
University of Wisconsin, Madison	University	Psychiatric institute, psychiatric department	1,028,000
Do.	do.	Muscle Biol. Res. Lab.	304,000
Total (56)			38,838,414

APPENDIX III

Notices of intent to file applications under title VII-A of the Public Health Service Act, as amended, as of Dec. 31, 1965

Applicant	Type	Discipline	Proposed construction	Amount requested (provisional)
ALABAMA (State total, \$750,000):				
Tuskegee Institute, Tuskegee Institute.....	College.....	Research in medical sciences.....	New unit.....	\$500,000
Do.....	do.....	School of agriculture.....	New building.....	250,000
ARIZONA (State total, \$225,000):				
University of Arizona, Tucson.....	University.....	Animal facilities.....	New facility.....	225,000
ARKANSAS (State total, \$50,000):				
Harding College, Searcy.....	College.....	Health-related research.....	New science building.....	50,000
CALIFORNIA (State total, \$19,330,000):				
California College of Medicine, Los Angeles.....	do.....	Basic medical sciences.....	Replacement and addition of new facilities.....	1,100,000
Donald N. Sharp Memorial Community Hospital, San Diego.....	Hospital.....	Research unit.....	New building.....	100,000
San Diego State College, San Diego.....	College.....	Biology.....	New wing to life science building.....	700,000
State of California, Department of Public Health, Berkeley.....		Virology and microbiology.....	Animal facility.....	100,000
University of California, Berkeley.....	University.....	Molecular biology and virus laboratory.....	New building.....	3,400,000
University of California, Davis.....	do.....	Biology.....	Biological sciences, unit 4.....	1,500,000
Do.....	do.....	Basic medical science research.....	Basic medical sciences, unit I.....	1,100,000
University of California, Los Angeles.....	do.....	Neurology and hematology.....	Research laboratories in Marion Davis Clinic Bldg.....	250,000
Do.....	do.....	Traffic accident research.....	New construction.....	10,000,000
University of California, San Francisco.....	do.....	Medical research.....	Genetics unit (complete 1 floor of health science institute and research, unit I).....	187,500
Do.....	do.....	do.....	Addition to Moffitt Hospital.....	500,000
Do.....	do.....	do.....	Research laboratories in San Francisco General Hospital.....	210,000
Do.....	do.....	Health sciences.....	Unit I, pharmacy unit (complete 1 floor).....	182,500
COLORADO (State total, \$1,520,000):				
Colorado State University, Fort Collins.....	do.....	Experimental and social psychology.....	New building.....	250,000
Do.....	do.....	Veterinary medical research facilities for microbiology, pathology, anatomy, and radiology.....	do.....	750,000
Do.....	do.....	Water resources research.....	Water resources research laboratory.....	350,000
University of Denver, Denver.....	do.....	Medical research.....	Research facilities.....	170,000

APPENDIX III

Notices of intent to file applications under title VII-A of the Public Health Service Act, as amended, as of Dec. 31, 1965—Continued

Applicant	Type	Discipline	Proposed construction	Amount requested (provisional)
DISTRICT OF COLUMBIA (Total, \$3,485,000):				
Children's Convalescent Hospital, Washington, D.C.	Hospital	Asthma research	Climatron and construction of 2 auxiliary laboratories.	\$200,000
Georgetown University, Washington, D.C.	University	Dialysis, organ transplant, and cancer chemotherapy.	New construction	200,000
Georgetown University Medical School, Washington, D.C.	do	Medical research	New multidiscipline medical research building.	2,500,000
George Washington University, Washington, D.C.	do	do	New research building (near Warwick Clinic).	500,000
Howard University, Washington, D.C.	do	Physiology	Expand present animal facilities.	85,000
FLORIDA (State total, \$900,000):				
University of Miami, Miami	do	Artificial atmospheres	Construction of environmental research center.	900,000
GEORGIA (State total, \$225,000):				
University of Georgia, Athens	do	Biochemistry	Research space in new building	225,000
ILLINOIS (State total, \$3,650,000):				
Chicago College of Osteopathy, Chicago	College	Medical research	Research portion of new 4-story building	225,000
Michael Reese Hospital, Chicago	Hospital	Speech and hearing research	New facility	375,000
Northern Illinois University, De Kalb	University	Psychology	New building	750,000
Do	do	Biology	do	1,000,000
Southern Illinois University, Carbondale	do	Microbiology, physiology, and psychology.	do	350,000
Do	do	Psychiatric research	New building (3 floors of 4-story building).	750,000
University of Illinois, Urbana	do	Speech and hearing	New building or remodel 2 floors.	200,000
INDIANA (State total, \$1,600,000):				
Purdue University, Lafayette	do	Psychology	New 4-story building	1,600,000
IOWA (State total, \$494,900):				
Iowa State University of Science and Technology, Ames.	do	Genetics	New building	250,000
Iowa State University, Ames	do	Biochemistry research	Renovation of 2 laboratories	150,000
University of Iowa, Iowa City	do	Environmental and occupational health.	New building (2 stories)	94,900
KANSAS (State total, \$300,000):				
H. L. Snyder Memorial Research Foundation, Winfield.	Foundation	Biochemistry	New building	200,000
Kansas State University, Manhattan	University	Animal research	do	100,000
KENTUCKY (State total, \$280,000):				
Spindletop Research, Lexington	Institute	Behavioral sciences	do	280,000
LOUISIANA (State total, \$550,000):				
Louisiana State University, Baton Rouge	University	Psychology	do	250,000
Do	do	Nutrition	Remodeling and addition to food sciences building.	300,000
MAINE (State total, \$250,000):				
The Jackson Laboratory, Bar Harbor	Laboratory	Animal research	New building	250,000

MARYLAND (State total, \$462,500):				
Friends of Psychiatric Research, Baltimore	Institute	Psychiatric research	New construction	62,500
Johns Hopkins University, Baltimore	University	Production of short-lived isotopes for medical research.	New facility for cyclotron	400,000
MASSACHUSETTS (State total, \$3,685,000):				
Boston City Hospital, Boston	Hospital	Neurology and neurosurgery	Remodel 2 floors of medical building	130,000
Do	do	Clinical research	New Evans Bldg	1,000,000
Lahey Clinic Foundation, Inc., Boston	Foundation	Medical research	New building	1,250,000
Massachusetts Institute of Technology, Cambridge	Institute	Water pollution, water as a virus vector, and related matters.	Addition of 2 floors to existing building	250,000
Tufts University Dental School, Boston	University	Dental research	New dental building	1,000,000
Harvard University, Boston	do	Department of psychology	Movable equipment	55,000
MICHIGAN (State total, \$8,375,000):				
Michigan State University, East Lansing	do	Pathology and pharmacology	New construction (unit I, life science building)	1,300,000
Michigan Technological Institute, Houghton	Institute	Research in burns and burn wounds.	Remodel 2 floors of TB Sanitarium	95,000
Oakland University, Rochester	University	Biology	New building	1,250,000
University of Michigan, Ann Arbor	do	Psychology	do	1,000,000
Do	do	Clinical research	Expansion of facilities	1,500,000
Do	do	Animal physiology	Additional floors	105,000
Do	do	Public health	Expansion, school of public health	2,000,000
Do	do	Child growth and development.	New building	750,000
Wayne State University, Detroit	do	Biomechanical engineering	New construction	375,000
MINNESOTA (State total, \$950,000):				
University of Minnesota, St. Paul	do	Health-related research	Laboratories for department of entomology	750,000
University of Minnesota, Minneapolis	do	Prenatal and perinatal biology research.	Convert 1 floor of Fairview Hospital	200,000
MISSISSIPPI (State total, \$250,000):				
Houston Hospital, Houston	Hospital	Pathology	Research center	250,000
MISSOURI (State total, \$3,400,000):				
Menorah Medical Center, Kansas City	Medical center	Clinical research	New building	3,250,000
St. Louis University, St. Louis	University	Basic and clinical dental research.	Research portion of new building	150,000
NEBRASKA (State total, \$62,500):				
University of Nebraska College of Medicine, Omaha	do	Mental retardation	Research area in new hospital	62,500
NEW JERSEY (State total, \$750,000):				
Rutgers, the State University, New Brunswick	do	Pharmacy	New 5-story building	750,000
NEW MEXICO (State total, \$75,000):				
New Mexico State University, Las Cruces	do	Psychology	New wing for department of psychology	75,000
NEW YORK (State total, \$4,940,000):				
Albany Medical College, Union University, Albany	do	Pharmacology and toxicology	New 2-story building	600,000
Alfred University, Alfred	do	Medical research	New research facilities	150,000
Cornell University, Ithaca	do	Toxicology and entomology	New facility	75,000
Montefiore Hospital, New York	Hospital	Radiology	Remodel 1st floor and add a floor	215,000
New York Medical College, New York	College	Basic science research	New multipurpose building	1,750,000
New York University, (College of Dentistry), New York	University	Basic and clinical research	New construction	1,500,000
New York State Psychiatric Institute, New York	Institute	Animal research	Remodeling and new construction	250,000
St. Barnabas Hospital, New York	Hospital	Neurosurgery, hematology, and cardiovascular research.	1 floor of new wing	400,000
NORTH CAROLINA (State total, \$400,000):				
Dorothea Dix Memorial Hospital, Raleigh	do	Mental health	New building	200,000
State of North Carolina (Murdoch Center), Butner	do	do	New facility	200,000

Notices of intent to file applications under title VII-A of the Public Health Service Act, as amended, as of Dec. 31, 1965—Continued

Applicant	Type	Discipline	Proposed construction	Amount requested (provisional)
OHIO (State total, \$2,725,000):				
Ohio College of Podiatry, Cleveland.....	College.....	Research and diagnostic center.....	New building.....	\$975,000
Ohio State University, Columbus.....	University.....	Zoology and entomology.....	do.....	750,000
University of Cincinnati, Cincinnati.....	do.....	Chemistry and biology.....	5½ floors in new science building.....	1,000,000
OKLAHOMA (State total, \$250,000):				
University of Oklahoma, Norman.....	do.....	Zoology.....	Renovation.....	250,000
OREGON (State total, \$650,000):				
University of Oregon (School of Dentistry), Portland.....	do.....	Biological dental sciences.....	New building.....	650,000
PENNSYLVANIA (State total, \$3,186,500):				
Children's Hospital, Pittsburgh.....	Hospital.....	Pathology and biochemistry research.....	Addition to existing building.....	1,000,000
Devereux Foundation, Devon.....	Foundation.....	Psychological research.....	New research building.....	87,500
Geisinger Medical Center, Danville.....	Research center.....	Pathology.....	New laboratories.....	500,000
Mercy Hospital, Pittsburgh.....	Hospital.....	Medical research.....	New building.....	1,500,000
University of Pittsburgh, Pittsburgh.....	University.....	Dental research (cleft palate).....	Renovation of building.....	99,000
SOUTH DAKOTA (State total, \$350,000):				
University of South Dakota, Vermillion.....	do.....	Psychology and mathematics.....	Biological computer center.....	350,000
TENNESSEE (State total, \$100,000):				
University of Tennessee, Knoxville.....	do.....	Experimental psychology.....	Psychology research facilities.....	100,000
TEXAS (State total, \$1,015,000):				
Houston Speech and Hearing Center, Houston.....	Medical center.....	Speech science, otolaryngology, neurology, and genetics.....	New facility.....	750,000
University of Houston, Houston.....	University.....	Biology.....	Excavation under present building and equipment.....	85,000
Rice University, Houston.....	do.....	Environmental health.....	Remodeling existing facilities.....	30,000
West Texas State University, Canyon.....	do.....	Physical, biological, and earth sciences.....	Kilgore Research Center.....	150,000
VIRGINIA (State total, \$1,350,000):				
University of Virginia (School of Medicine), Charlottesville.....	do.....	Basic sciences.....	New medical school building.....	1,350,000
WASHINGTON (State total, \$2,499,200):				
Providence Hospital, Seattle.....	Hospital.....	Anesthesiology.....	New research laboratory.....	375,000
University of Washington, Seattle.....	University.....	Aquatic biology.....	New building.....	500,000
Do.....	do.....	Biological sciences.....	do.....	1,600,000
Washington State University, Pullman.....	do.....	Experimental station at Wneatchee.....	Research facilities.....	24,200
WISCONSIN (State total, \$2,000,000):				
Mount Sinai Hospital, Milwaukee.....	Hospital.....	Pathology.....	New research facility.....	1,000,000
University of Wisconsin, Madison.....	University.....	Food research.....	New building.....	1,000,000
Total notices of intent to file (103).....				71,085,600

APPENDIX IV

Health research facilities completed, title VII-A, through Dec. 31, 1965

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
UNITED STATES AND PUERTO RICO (total).....					\$183,618,257
ALABAMA (total).....					2,040,575
Auburn University, Auburn.....	Research in nutrition.....	364	Expansion.....	1960	70,000
Do.....	Veterinary research.....	366	New construction.....	1961	224,385
Do.....	Sanitary engineering.....	958	do.....	1963	10,334
Do.....	Human nutrition and infant research.....	923	do.....	1963	56,312
Do.....	Biochemistry.....	924	do.....	1963	60,290
Children's Hospital, Birmingham.....	Clinical research and drug evaluation.....	930	Expansion.....	1965	27,100
Southern Research Institute, Birmingham.....	Medical research.....	46	New construction.....	1958	250,000
Do.....	do.....	740	do.....	1962	150,000
University of Alabama, Birmingham.....	Basic and clinical research.....	32	do.....	1962	1,192,154
ARIZONA (total).....					802,086
Arizona State University, Tempe.....	Life sciences.....	123	New construction.....	1960	280,392
St. Joseph's Hospital, Phoenix.....	Neurological research.....	617	do.....	1962	53,635
University of Arizona, Tucson.....	Biological research.....	223	do.....	1958	83,900
Do.....	Animal pathology.....	443	do.....	1960	7,375
Do.....	Animal science.....	529	do.....	1960	13,120
Do.....	Pharmaceutical chemistry.....	630	do.....	1961	8,837
Do.....	Nutrition research.....	398	Equipment.....	1960	3,059
Do.....	Basic medical research.....	629	New construction.....	1962	296,518
Do.....	Biophysics.....	706	Expansion.....	1962	55,250
ARKANSAS (total).....					1,216,000
University of Arkansas, Fayetteville.....	Infectious diseases.....	1121	Expansion.....	1964	150,000
University of Arkansas Medical Center, Little Rock.....	Medical and clinical research.....	356	New construction.....	1960	1,066,000
CALIFORNIA (total).....					14,027,607
California Institute of Technology, Pasadena.....	Biological research.....	29	New construction.....	1961	477,000
Do.....	do.....	333	do.....	1960	54,250
Do.....	do.....	831	Remodeling.....	1962	16,100
Do.....	Sanitary engineering.....	377	Equipment.....	1962	39,900
Cedars of Lebanon-Mount Sinai Hospital of the Los Angeles Jewish Center, Los Angeles.....	Basic medical and clinical research.....	560	New construction.....	1963	456,534
Do.....	do.....	741	Expansion.....	1962	216,542
Do.....	Clinical-medical.....	1083	do.....	1963	32,985

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
CALIFORNIA—Continued					
Children's Hospital of East Bay, Oakland	Pediatrics	309	New construction	1959	\$75,000
Children's Hospital Society of Los Angeles, Los Angeles	do	108	Expansion	1961	102,014
City of Hope Medical Center, Duarte	Clinical research	386	New construction	1962	112,000
Highland Alameda County Hospital, Oakland	Lipid metabolism	625	Expansion	1961	65,987
Kaiser Foundation Hospitals, San Francisco	Allergy	988	New construction	1964	49,280
The Langley Porter Neuro-Psychiatric Institute, San Francisco	Mental health	272	Expansion	1959	150,000
Mount Zion Hospital & Medical Center, San Francisco	Basic medical and clinical research	721	Expansion and remodeling	1965	173,483
Palo Alto Medical Research Foundation, Palo Alto	Health related sciences	26	New construction	1958	282,145
Do	Medical research	3187	Expansion	1965	45,651
Pasadena Foundation for Medical Research, Pasadena	Basic medical research	534	Equipment	1959	5,740
Presbyterian Hospital & Medical Center, San Francisco	Surgical and cardiovascular	910	New construction	1964	274,200
Rancho Los Amigos Hospital, Downey	Research in chronic diseases	572	Expansion	1962	304,000
Rees Stealy Clinic Research Foundation, San Diego	Medical research	438	Equipment	1958	5,000
Reiss Davis Clinic for Child Guidance, Los Angeles	Psychiatry	605	New construction	1961	28,213
Scripps Clinic & Research Foundation, La Jolla	Medical research	588	do	1961	214,050
Do	Biochemistry	1051	Expansion	1962	87,475
Stanford Research Institute, Menlo Park	Biological research	548	New construction	1962	300,000
Stanford University, Palo Alto	Basic medical sciences	15	New construction and expansion	1960	2,804,054
Do	Neurophysiology	1024	Expansion	1962	86,418
Stanford University, Stanford	Chemistry of natural products	657	New construction	1960	210,000
Do	Sanitary engineering	1010	Remodeling	1962	89,547
University of California, Berkeley	Biochemistry	575	New construction	1964	766,745
Do	do	720	do	1964	107,500
University of California, Davis	Bacteriology, genetics, and biochemistry	670	do	1963	837,275
University of California, Los Angeles	Life sciences research	60	do	1960	632,126
Do	Chronic disease research	827	do	1965	400,000
Do	Neurology and psychiatry	86	Expansion	1961	1,337,625
Do	Pediatrics	707	New construction	1962	556,556
University of California, California College of Medicine, Los Angeles	Medical research	571	do	1963	107,056
Do	Health sciences	3006	Remodeling	1965	62,321
University of California, Richmond	Sanitary engineering	557	New construction	1963	199,500
University of California, San Francisco	Medical sciences	78	Equipment	1958	25,988
Do	Cardiovascular research	79	Expansion	1958	251,875
Do	Radiological research	200	Remodeling	1958	24,972
University of Southern California, Los Angeles	Basic medical research	68	New Construction	1962	899,850
Do	Biological sciences	3163	do	1964	1,060,650
COLORADO (total)					952,061
Colorado State University, Fort Collins	Veterinary medicine	35	New construction	1958	100,000
Do	Metabolic research	574	Remodeling	1962	25,470

Do	Sanitary engineering	582	New construction and expansion	1963	118,607
Do	Veterinary medicine	632	Remodeling	1963	15,099
General Rose memorial Hospital, Denver	Clinical research	311	New construction and remodeling	1964	50,000
Jewish National Home for Asthmatic Children, Denver	Asthma and allergy research	213	New construction	1959	100,000
National Jewish Hospital, Denver	Medical research (chest diseases)	33	do	1959	274,943
Do	do	844	Equipment	1961	4,404
Penrose Hospital, Colorado Springs	Medical research	504	Expansion	1960	4,023
University of Colorado Medical Center, Denver	do	602	New construction	1960	31,500
Do	Psychiatry	903	do	1962	72,580
Webb Institute for Medical Research and University of Colorado Medical Center, Denver	Biochemical and microbial genetics	530	New construction and expansion	1960	55,435
Do	Medical research	1059	Expansion and remodeling	1964	100,000
CONNECTICUT (total)					2,219,345
Hartford Hospital, Hartford	Medical-clinical research	393	Remodeling	1960	80,191
Do	do	774	do	1961	16,086
John B. Pierce Foundation of Connecticut, New Haven	Basic medical research	960	Expansion	1963	195,757
St. Francis Hospital, Hartford	Cardiovascular research	476	New construction	1959	34,079
University of Connecticut, Storrs	Pharmacy	156	do	1960	167,136
Do	Life sciences research	158	do	1961	650,000
Yale University, New Haven (facility at Bethany)	Animal pathology	715	do	1962	42,200
Yale University, New Haven	Biophysics	286	Expansion	1958	150,000
Do	Anatomy and biochemistry	36	Expansion and remodeling	1958	389,400
Do	Microbiology	726	Remodeling	1962	80,000
Do	Medicine and pediatrics	237	Expansion	1958	276,153
Do	Surgical research	3048	Expansion and remodeling	1964	40,593
Do	Pathology	711	Remodeling	1962	77,456
Do	Metabolic research	784	do	1961	20,294
DISTRICT OF COLUMBIA (total)					1,055,948
Catholic University of America	Biology	507	New construction	1962	216,642
Children's Hospital of District of Columbia	Pediatric disease research	69	Expansion	1959	150,000
George Washington University	Medical and surgical research	306	do	1959	45,000
Georgetown University	Medical research	22	do	1959	82,500
Do	do	305	New construction	1960	186,806
Do	Science and basic health research	432	do	1964	350,000
Washington Hospital Center	Medical and clinical research	640	do	1964	25,000
FLORIDA (total)					3,239,617
Florida State Board of Health, Vero Beach	Medical entomology	328	New construction	1961	28,867
Florida State University, Tallahassee	Biological sciences	695	do	1962	475,000
Do	Psychology	762	do	1965	327,928
Mount Sinai Hospital of Greater Miami, Inc., Miami	Cardiopulmonary research	248	Expansion	1960	33,278
University of Florida, Gainesville	Medical and clinical research	146	do	1961	540,000
Do	Sanitary engineering	172	do	1959	26,612
Do	Air pollution research	442	Remodeling	1960	8,110
Do	Medical research	520	New construction	1960	25,107
Do	do	890	do	1963	60,517
Do	Entomology	858	Equipment	1963	6,000
Do	Nuclear science	1,116	New construction	1964	168,865

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
FLORIDA—Continued					
University of Miami, Miami	Basic medical research	14	New construction and remodeling	1959	\$1,070,748
Do.	Basic medical and clinical	130	New construction	1963	72,877
University of Miami and Board of Dade County Commissioners, Miami	Ophthalmology	686	Expansion	1962	80,612
University of South Florida, Tampa	Biological research	850	New construction	1964	198,850
Variety Children's Hospital, Miami	Pediatric research	338	do.	1959	116,246
GEORGIA (total)					2,268,406
Emory University, Atlanta	Medical research	30	Remodeling	1959	354,106
Do.	Biology research	489	New construction	1962	100,164
Georgia Institute of Technology, Atlanta	Radioisotope and biological research	182	do.	1959	125,000
Do.	Chemistry (natural products)	581	Remodeling	1960	5,815
Do.	Sanitary engineering	708	do.	1963	18,597
Do.	Micromeritics	887	New construction	1964	46,379
Grady Memorial Hospital, Atlanta	Clinical research	543	Expansion	1960	20,484
Medical College of Georgia, Eugene Talmadge Memorial Hospital, Augusta	do.	343	do.	1961	787,460
Piedmont Hospital, Atlanta	Basic and clinical research	699	New construction	1961	79,364
University of Georgia, Athens	Biological sciences	226	do.	1960	631,037
Do.	Pharmacy	431	do.	1964	100,000
HAWAII (total)					293,125
The Queen's Hospital, Honolulu	Medical and clinical research	34	Expansion	1961	50,000
University of Hawaii, Honolulu	Basic medical research	647	New construction	1963	243,125
IDAHO (total)					19,076
Idaho State College, Pocatello	Pharmacy	384	Remodeling	1960	19,076
ILLINOIS (total)					11,722,735
Chicago College of Osteopathy, Chicago	Physiology and pharmacology	576	Equipment	1960	5,469
Chicago Medical School, Chicago	Basic medical and clinical research	92	New construction	1963	1,121,696
Chicago Wesley Memorial Hospital, Chicago	Clinical research	224	Equipment	1960	49,068
Do.	Medical research	848	Remodeling	1962	89,479
Children's Memorial Hospital, Chicago	Pediatric research	739	New construction	1963	680,372
Evanston Hospital Association, Evanston	Clinical research	750	Expansion and remodeling	1962	66,378
Hektoen Institute for Medical Research of Cook County Hospital, Chicago	do.	157	New construction	1961	250,000
Do.	Basic and clinical research	3075	do.	1965	1,338,606
Do.	Cardiophysiology	783	Expansion and remodeling	1964	65,856

Illinois Department of Mental Health, Elgin	Biochemical research in nutrition	113	New construction	1960	314,982
Illinois Department of Mental Health, Springfield (Galesburg State Hospital, Galesburg)	Psychiatry	114	Expansion	1960	131,762
Illinois Department of Mental Health, Chicago	do	115	Equipment	1959	36,148
IIT Research Institute, Chicago	Research in basic sciences	473	New Construction	1961	169,250
Illinois Institute of Technology, Chicago	Biology	403	Equipment	1960	5,095
La Rabida Jackson Park Sanitarium, Chicago	Rheumatic fever	194	New construction and remodeling	1959	192,500
Michael Reese Hospital & Medical Center, Chicago	Biological and psychiatric research	877	do	1963	117,080
Northern Illinois University, De Kalb	Basic medical research	841	Equipment	1963	7,496
Do	Chemistry-physics	1021	New construction	1964	45,289
Northwestern University, Evanston	Bioengineering and biochemical	815	Expansion	1964	648,161
Presbyterian-St. Luke's Hospital, Chicago	Basic and clinical research	379	New construction	1961	527,410
University of Chicago, Chicago	Obstetrics and gynecology	17	Remodeling	1959	250,000
Do	Physiological psychology	103	do	1958	25,596
Do	Gastroenterology research	199	do	1959	16,500
Do	Anatomy research	265	do	1961	56,100
Do	Basic medical sciences	291	do	1960	44,500
Do	Dermatology	345	do	1962	19,526
Do	Clinical research	251	New construction	1964	1,127,993
Do	Chronic disease research	526	do	1962	168,936
Do	Biochemical	550	Remodeling	1959	3,732
Do	Zoology research	262	do	1960	94,375
Do	Medical statistics	540	New construction and remodeling	1962	58,976
Do	Zoology and psychology	759	New construction	1961	35,000
Do	Physiology	792	Remodeling	1962	11,263
University of Illinois, Chicago	Immunology	87	do	1958	50,000
Do	Dental Research	88	do	1958	25,260
Do	Anatomy	89	do	1958	1,701
Do	Biochemistry	90	do	1958	8,500
Do	Allergy research	91	do	1958	8,400
Do	Medical sciences	880	New construction	1965	1,238,605
Do	Medical research	173	do	1960	750,000
Do	Pharmacology	709	Remodeling	1961	2,593
Do	Biochemistry and physiology	1062	do	1963	25,750
University of Illinois, Urbana	Veterinary medicine	399	New construction	1962	128,100
Do	Arthropod-borne diseases	168	do	1963	693,015
Do	Biochemistry	179	Remodeling	1962	89,502
Do	Biophysical research	245	do	1962	213,598
Do	Physiology	618	New construction	1962	80,000
University of Illinois, Chicago (facility at Lisle)	Pharmacy	1063	Expansion	1964	100,000
University of Illinois, Urbana	Lipid metabolism and nutrition	847	New construction	1963	400,000
University of Illinois, Chicago	Pathology	1068	Remodeling	1963	62,167
Do	Orthopaedics	1069	Expansion	1964	70,950
INDIANA (total)					2,963,177
Caylor Nickel Research Foundation, Bluffton	Medical research	1027	New construction	1964	84,800
Indiana University, Indianapolis	Psychiatry	94	Equipment	1959	103,503
Do	Medical research	96	do	1958	109,500
Do	Dental research	97	Expansion	1961	161,972
Do	Biochemistry	621	Equipment	1963	16,025
Do	Clinical and medical research	651	Remodeling	1962	357,966
Do	Virus research	1022	Expansion	1962	26,282

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
INDIANA—Continued					
Indiana University, Bloomington.....	Biology.....	95	New construction.....	1958	\$21,346
Do.....	Psychological research.....	235	do.....	1963	582,049
Do.....	Physiology.....	468	Expansion.....	1964	126,626
Indiana State Department of Mental Health, Indianapolis (facility at Butlerville).....	Mental health.....	912	New construction.....	1963	48,188
New Castle State Hospital, New Castle.....	Seizure disorders.....	138	Remodeling.....	1957	30,707
Purdue University, Lafayette.....	Life sciences.....	193	Equipment.....	1959	548,197
Do.....	Biophysical chemistry.....	283	Expansion.....	1959	24,499
Do.....	Veterinary medicine.....	284	New construction.....	1960	300,000
Do.....	Physiological research.....	451	Expansion.....	1961	155,201
Do.....	Audiology and bioacoustics.....	450	Equipment.....	1960	24,331
Do.....	Sanitary engineering.....	586	New construction.....	1964	71,014
Do.....	Psychology and genetics.....	781	Expansion.....	1962	65,270
Do.....	Biological sciences.....	856	Expansion and remodeling.....	1964	94,233
University of Notre Dame du Lac, Notre Dame.....	Biochemistry.....	352	Remodeling.....	1961	9,798
Valparaiso University, Valparaiso.....	Biological research.....	757	Expansion.....	1960	1,670
IOWA (total).....					1,496,895
Cornell College, Mount Vernon.....	Biology.....	644	Remodeling.....	1960	2,765
Iowa State University of Science & Technology, Ames.....	Biophysics.....	652	New construction.....	1962	200,000
Do.....	Nutrition.....	681	Remodeling.....	1962	28,239
Do.....	Food sanitation and preservation.....	683	Expansion.....	1962	119,502
Do.....	Medical research.....	855	New construction.....	1963	65,000
Do.....	Biochemical research.....	979	do.....	1965	162,769
Luther College, Decorah.....	Biology and chemistry.....	501	New Construction and expansion.....	1963	25,000
State University of Iowa, Iowa City.....	Medical research.....	64	New construction and remodeling.....	1958	122,208
Do.....	Otolaryngology.....	65	Equipment.....	1959	23,201
Do.....	Otological histology.....	260	Expansion.....	1959	3,750
Do.....	Basic medical and clinical research.....	303	Equipment.....	1959	81,132
Do.....	Sanitary engineering research.....	330	Expansion.....	1959	11,916
Do.....	Biology.....	527	New construction.....	1960	9,949
Do.....	do.....	485	Remodeling.....	1959	6,877
Do.....	Nutrition.....	517	do.....	1960	25,967
Do.....	Psychology.....	519	do.....	1959	22,415
Do.....	Psychiatry.....	598	Expansion.....	1962	252,045
Do.....	Pharmacy.....	666	New construction.....	1963	224,775
Do.....	Pharmacology.....	872	Remodeling.....	1962	42,700
Do.....	Physiology.....	1105	do.....	1964	66,685

Kansas (total).....					1,607,349
Institute of Logopedics, Inc., Wichita.....	Psycho physical communications.....	650	Expansion.....	1962	53,061
Kansas State University of Agriculture and Applied Science, Manhattan.....	Veterinary research.....	436	Remodeling.....	1960	47,700
Do.....	Dairy and poultry research.....	537	New construction.....	1964	93,020
Do.....	Psychology.....	731	Remodeling.....	1961	5,017
Do.....	Environmental research.....	885	New construction.....	1964	80,000
Do.....	Genetics.....	927	Remodeling.....	1963	14,131
The Menninger Foundation, Topeka.....	Psychiatry.....	1127	Expansion and remodeling.....	1963	159,711
University of Kansas, Lawrence.....	Biological research.....	246	New construction and remodeling.....	1962	135,785
Do.....	Research in environmental health.....	385	New construction.....	1962	70,453
Do.....	Vertebrate research.....	641	Expansion.....	1963	45,731
University of Kansas Medical Center, Kansas City.....	Clinical research.....	471	Remodeling.....	1960	50,000
Do.....	Medical science research.....	470	New construction.....	1962	850,200
Washburn University, Topeka.....	Psychology.....	963	Remodeling.....	1962	2,540
KENTUCKY (total).....					3,692,480
Kentucky State Department of Health, Frankfort.....	Public health.....	524	New construction.....	1960	100,000
University of Kentucky, Lexington.....	Basic medical sciences.....	56	do.....	1960	1,387,539
Do.....	Dental research.....	634	do.....	1961	645,827
University of Kentucky, Lexington (research foundation).....	Sanitary engineering.....	735	Equipment.....	1961	2,809
University of Louisville, Louisville.....	Chemistry.....	196	Expansion.....	1960	50,000
Do.....	Basic and clinical research.....	319	New construction.....	1963	1,473,095
Williamson Appalachian Regional Hospital, South Williamson.....	Medical research.....	360	Expansion.....	1960	33,210
LOUISIANA (total).....					4,086,123
Alton Ochsner Medical Foundation, New Orleans.....	Clinical and medical research.....	101	New construction.....	1960	200,000
Louisiana State University, New Orleans.....	Basic medical research.....	814	Expansion.....	1964	1,468,121
Loyola University of the South, New Orleans.....	Biochemical and medical technology.....	603	Remodeling.....	1962	50,000
Southern University, Baton Rouge.....	Basic sciences research.....	729	Expansion.....	1962	93,002
Touro Infirmary, New Orleans.....	Medical and clinical research.....	99	New construction.....	1960	75,000
Tulane University, New Orleans.....	Medical research.....	189	do.....	1964	2,200,000
MAINE (total).....					158,291
The Jackson Laboratory, Bar Harbor.....	Radiobiology research.....	301	Remodeling and expansion.....	1959	25,058
Do.....	Animal research facilities.....	444	New construction.....	1962	47,653
University of Maine, Orono.....	Natural products research.....	419	Expansion.....	1959	9,410
Do.....	Animal pathology.....	568	Equipment.....	1960	25,506
Do.....	Chemistry.....	1101	Expansion.....	1964	21,288
Do.....	Animal pathology.....	820	New construction.....	1962	6,248
Do.....	Environmental engineering.....	1150	Remodeling.....	1964	23,128

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
MARYLAND (total)					\$6,146,675
American Type Culture Collection, Rockville	Microbiological culture research	635	New construction	1965	90,278
Baltimore City Hospitals, Baltimore	Medical research	110	Remodeling	1958	115,000
Church Home & Hospital, Baltimore	Medical research	464	do	1960	2,349
Goucher College, Towson	Chemistry	1181	Expansion	1965	102,789
Johns Hopkins Hospital, Baltimore	Pediatric research	667	New construction	1965	1,009,583
Do	Otolaryngology	753	Remodeling	1962	54,590
Do	Basic medical research	106	New construction	1960	1,860,000
Do	do	853	Remodeling	1963	176,319
Do	Biophysics research	358	New construction	1964	350,000
Johns Hopkins University, Baltimore (Homewood campus)	Biophysics research	288	Expansion	1959	150,000
Johns Hopkins University, Baltimore	Radiological science	779	do	1965	826,144
Johns Hopkins University, Baltimore (Homewood campus)	Biological sciences	562	do	1962	403,375
Sinai Hospital of Baltimore, Inc., Baltimore	Basic medical and clinical research	11	Equipment	1959	53,428
University of Maryland, Baltimore	Basic medical research	728	Remodeling	1964	853,918
Do	Clinical research	954	New construction	1964	98,902
MASSACHUSETTS (total)					18,470,113
Amherst College, Amherst	Microbiology and chemistry	389	Expansion	1960	143,064
Austen Riggs Center, Inc., Stockbridge	Psychiatric research	16	do	1958	191,367
Boston City Hospital, Boston	Pathology	440	Remodeling	1962	29,555
Do	Clinical research	552	do	1963	150,000
Do	Neurology	1159	New construction	1964	28,641
Boston City Hospital, Sears Surgical Laboratory, Boston	Cellular and tissue metabolism	220	Remodeling	1960	100,000
Boston City Hospital, Thorndike Memorial Laboratory, Boston	Medical-clinical research	273	Expansion and remodeling	1964	225,000
Boston Dispensary, Boston	Rehabilitation and geriatrics	72	Expansion	1958	133,356
Boston Lying-In Hospital, Boston	Obstetric research	163	New construction	1960	198,650
Boston University, Boston	Medical and basic science research	132	do	1960	1,500,000
Do	Biological research	568	Remodeling	1962	70,522
Brandeis University, Waltham	Biochemistry	148	New construction	1960	363,373
Do	Chemistry	843	do	1965	349,579
Do	Biochemistry	1179	do	1965	547,800
Children's Cancer Research Foundation, Boston	Cancer and basic research	270	New construction and expansion	1959	400,000
Children's Hospital, Boston	Surgical research	297	New construction and remodeling	1959	142,217
Clark University, Worcester	Psychology	124	Remodeling	1958	33,338
Do	Biological research	694	do	1961	84,375
Diabetes Foundation, Inc., Boston	Clinical research	3039	Expansion	1964	328,150
Forsyth Dental Center, Boston	Dental research	365	do	1960	131,174

Harvard University, Boston.....	Physiology.....	732	do.....	1962	193, 329
Do.....	Anatomy and pharmacology.....	816	Remodeling.....	1962	1, 034, 136
Harvard University, Cambridge.....	Basic science research.....	135	New construction and remodeling.....	1959	904, 218
Do.....	Behavioral sciences.....	578	New construction.....	1961	161, 131
Do.....	do.....	1052	do.....	1965	553, 110
Harvard University, Boston.....	Anatomy and pharmacology.....	231	Remodeling and expansion.....	1959	1, 081, 377
Harvard University, Boston (facility at Southborough).....	Biological research.....	645	New construction.....	1964	191, 000
Harvard University, Boston.....	Nutrition and environmental hygiene.....	490	do.....	1962	1, 688, 478
Do.....	Nutrition.....	1120	Expansion.....	1964	525, 802
Holy Ghost Hospital, Cambridge.....	Cancer research.....	494	Remodeling.....	1960	72, 271
Marine Biology Laboratory, Woods Hole.....	Basic and biological sciences.....	300	New construction.....	1962	369, 250
Massachusetts Eye & Ear Infirmary, Boston.....	Ophthalmology.....	410	Expansion.....	1960	35, 745
Massachusetts General Hospital, Boston.....	Neurosurgery.....	4	New construction.....	1957	95, 938
Do.....	Psychiatry.....	42	Expansion.....	1960	93, 069
Do.....	Basic neurological research.....	187	do.....	1961	146, 320
Do.....	Allergy.....	215	Remodeling.....	1958	20, 112
Do.....	Orthopedic research.....	308	Expansion.....	1960	107, 370
Do.....	Neurological research.....	335	New construction.....	1959	365, 616
Do.....	Hematology research.....	458	Remodeling.....	1959	37, 502
Do.....	Thyroid research.....	547	do.....	1961	45, 664
Massachusetts Institute of Technology, Cambridge.....	Biology.....	591	Expansion and remodeling.....	1961	100, 633
Do.....	Biology and nutrition.....	813	Expansion.....	1965	2, 129, 082
Do.....	Psychology.....	902	Remodeling.....	1964	252, 690
Medfield Foundation, Inc., Medfield.....	Mental health.....	606	do.....	1962	15, 732
Memorial Hospital, Worcester.....	Clinical research.....	376	New construction.....	1964	114, 597
New England Center Hospital, Boston.....	Medical research.....	28	Expansion.....	1959	438, 643
New England Deaconess Hospital, Boston.....	Cancer research.....	31	do.....	1959	120, 000
Northeastern University, Boston.....	Psychology.....	1141	do.....	1963	50, 000
Peter Bent Brigham Hospital, Boston.....	Orthopedic research.....	1097	Expansion and remodeling.....	1963	22, 111
Red Acre Farm, Stow.....	Biological research.....	341	Expansion.....	1959	23, 076
Retina Foundation, Boston.....	Eye research.....	44	New construction.....	1962	692, 654
Robert B. Brigham Hospital, Boston.....	Research in rheumatic diseases.....	317	Remodeling.....	1958	7, 525
Tufts University, Boston.....	Biochemistry and nutrition.....	128	do.....	1958	22, 448
Do.....	Pharmacology.....	406	do.....	1959	23, 740
Do.....	Basic science research.....	685	do.....	1963	677, 000
Tufts University, Medford.....	Sanitary engineering.....	921	Equipment.....	1963	5, 065
Tufts University, West Somerville.....	Organic chemistry.....	1149	New construction.....	1965	45, 681
University of Massachusetts, Amherst.....	Psychology.....	112	do.....	1961	176, 656
Do.....	Zoology.....	144	do.....	1961	240, 304
Do.....	Biochemistry.....	205	Equipment.....	1959	4, 375
Do.....	Animal pathology.....	764	Expansion.....	1963	8, 965
Worcester Foundation for Experimental Biology, Shrewsbury.....	Biology.....	98	New construction and remodeling.....	1960	358, 710
Do.....	Biochemical research.....	1164	New construction.....	1965	68, 827
MICHIGAN (total).....					7, 468, 770
Hawthorn Center, Northville.....	Psychiatry.....	687	Expansion.....	1962	75, 000
Henry Ford Hospital, Detroit.....	Otological research.....	493	Remodeling.....	1959	26, 494
Michigan State University, East Lansing.....	Biological research.....	183	New construction.....	1960	310, 000
Do.....	Biochemistry and biomedical research.....	1000	do.....	1965	2, 000, 000
University of Detroit, Detroit.....	Dental research.....	1142	New construction and remodeling.....	1963	156, 534

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
MICHIGAN—Continued					
University of Michigan, Ann Arbor	Mental health research	37	New construction	1960	561,373
Do.	Medical research	71	Remodeling	1959	61,912
Do.	do.	177	do.	1960	52,011
Do.	Tissue culture	197	do.	1958	22,548
Do.	Medical research	863	New construction	1963	206,529
Do.	do.	918	do.	1964	1,570,749
Do.	Research in public health	80	Expansion	1959	746,225
Do.	Cellular biology	808	New construction	1964	427,234
Do.	Biological chemistry	368	Equipment	1960	25,825
Do.	Genetics	953	New construction	1963	256,800
Do.	Pharmacy	198	do.	1961	339,500
Wayne State University, Detroit	Life sciences	53	do.	1962	547,250
Do.	Environmental health research	532	Equipment	1961	25,486
Do.	Surgery	3100	Remodeling	1965	57,300
MINNESOTA (total)					4,916,631
Augsburg College, Minneapolis	Organic and physical chemistry	756	Remodeling	1961	4,804
Carleton College, Northfield	Biological research	668	Equipment	1961	18,401
Hamline University, St. Paul	Chemistry	935	Remodeling	1963	10,456
Mayo Foundation, Rochester	Medical research	151	New construction	1959	208,283
Do.	Biometrics	701	do.	1961	108,006
Do.	Medical and surgical research	1078	Remodeling	1964	158,746
Minneapolis Medical Research Foundation, Inc., Minneapolis	do.	150	New construction	1959	102,871
Do.	Hyperpressure surgical research	1138	do.	1964	71,146
Do.	Medical and surgical research	718	Expansion	1961	28,600
Mount Sinai Hospital, Minneapolis	Cardiovascular research	351	New construction	1960	60,694
Ramsey County Welfare Department & Hospital Facility-Building Commission (Ancker Hospital), St. Paul	Surgery	1098	do.	1965	265,742
St. Joseph's Hospital, St. Paul	Cardiopulmonary research	324	Remodeling	1958	51,559
St. Olaf College, Northfield	Environmental health research	730	Expansion	1961	4,728
University of Minnesota, Minneapolis	Anatomy	19	Remodeling	1958	26,110
Do.	Physiology and pharmacology	20	New construction and remodeling	1964	1,077,630
Do.	Cardiovascular research	127	Expansion	1959	229,321
Do.	Ophthalmological research	129	New construction	1962	893,939
Do.	Cancer	202	do.	1962	193,452
Do.	Pharmacy	249	Remodeling	1962	87,470
University of Minnesota, St. Paul	Veterinary research	266	New construction	1963	329,515
University of Minnesota, Minneapolis	Chemistry	428	Remodeling	1960	41,150
Do.	Sanitary engineering	457	do.	1960	4,977
University of Minnesota, Austin	Biological research	460	New construction	1962	260,142
University of Minnesota, Minneapolis	Surgical research	554	Remodeling	1961	15,145

Do.....	Pediatric research.....	693	Expansion.....	1962	41,425
Do.....	Organic chemistry.....	713	Remodeling.....	1962	41,706
University of Minnesota, St. Paul.....	Biochemistry.....	891	do.....	1963	14,791
University of Minnesota, Minneapolis.....	Otolaryngological research.....	793	New construction.....	1962	20,674
Do.....	Psychiatry, neurology, and pediatrics.....	907	Expansion.....	1965	438,071
Do.....	Environmental health.....	976	Remodeling.....	1965	107,077
MISSISSIPPI (total).....					1,845,250
University of Mississippi School of Medicine and Missis- sippi State Building Commission, Jackson.....	Basic medical research.....	672	New construction.....	1963	1,500,000
University of Mississippi and Mississippi State Building Commission, University.....	Pharmacy and biology.....	894	do.....	1963	269,000
University of Mississippi, Jackson.....	Basic medical research.....	869	Equipment.....	1963	76,250
MISSOURI (total).....					2,477,867
Malcolm Bliss Mental Health Center, St. Louis.....	Mental health.....	674	Remodeling.....	1962	32,000
Menorah Medical Center, Kansas City.....	Clinical research.....	636	Expansion.....	1962	189,128
Midwest Research Institute, Kansas City.....	Basic medical research.....	316	New construction.....	1959	142,525
St. Louis University, St. Louis.....	Pharmacology.....	392	Remodeling.....	1960	49,388
Do.....	Neurology.....	1124	Expansion.....	1963	16,012
Do.....	Psychiatry.....	566	New construction.....	1964	62,287
University of Missouri at Kansas City.....	Dental research.....	66	Expansion.....	1958	25,538
Do.....	Pharmacy.....	690	New construction.....	1965	50,000
University of Missouri, Columbia.....	Sanitary engineering.....	1074	do.....	1964	8,988
Do.....	Basic medical and clinical research.....	312	Expansion.....	1961	391,596
University of Missouri, Rolla.....	Sanitary engineering.....	968	Remodeling.....	1963	7,300
Washington University, St. Louis.....	Medical research.....	41	Expansion.....	1957	70,838
Do.....	Basic medical and clinical research.....	49	New construction.....	1963	811,488
Do.....	Life sciences.....	70	Expansion.....	1958	162,951
Do.....	Sanitary engineering.....	277	Equipment.....	1960	25,599
Do.....	Dental research.....	263	Expansion.....	1963	200,000
Do.....	Cardiology.....	3056	do.....	1965	44,033
Do.....	Sanitary engineering.....	633	Equipment.....	1960	19,587
Do.....	Psychiatry.....	819	Expansion and remodeling.....	1965	168,659
MONTANA (total).....					857,472
Montana State University, Bozeman.....	Biological sciences.....	67	Expansion.....	1961	304,735
Do.....	Veterinary research.....	423	New construction.....	1962	250,000
Do.....	Chemistry.....	1081	Expansion.....	1964	69,104
Montana State University, Missoula.....	Health sciences.....	252	New construction.....	1961	233,633
NEBRASKA (total).....					1,843,102
Creighton Memorial St. Joseph's Hospital, Omaha.....	Cardiology.....	1176	Expansion.....	1964	30,528
Creighton University, Omaha.....	Basic medical research.....	882	New construction.....	1964	586,500
University of Nebraska, Omaha.....	Neuropsychiatric.....	230	do.....	1960	199,559
Do.....	Cancer research.....	669	do.....	1965	803,769
Do.....	Clinical research.....	523	do.....	1962	164,687
University of Nebraska, Lincoln.....	Animal pathology and hygiene.....	626	Remodeling.....	1962	58,059

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
NEVADA (total)-----					\$56,614
University of Nevada, Reno-----	Life sciences-----	786	Expansion and remodeling-----	1963	56,614
NEW HAMPSHIRE (total)-----					1,168,198
Dartmouth College, Hanover-----	Medical sciences research-----	276	New construction-----	1962	976,801
Do-----	Psychology-----	1008	Equipment-----	1963	24,272
University of New Hampshire, Durham-----	Life sciences research-----	363	New construction-----	1960	150,000
Do-----	Microbiology-----	1019	Equipment-----	1962	17,125
NEW JERSEY (total)-----					2,444,343
Fairleigh Dickinson University, Teaneck-----	Dental research-----	107	Remodeling-----	1959	32,458
New Jersey College of Medicine & Dentistry, Jersey City-----	Basic sciences research-----	388	do-----	1961	141,200
Newark Beth Israel Hospital, Newark-----	Basic medical and clinical research-----	241	Equipment-----	1957	7,600
Princeton University, Princeton-----	Biological sciences research-----	289	New construction-----	1961	601,481
Do-----	Chemistry-----	1091	do-----	1964	274,937
Rutgers, The State University, New Brunswick-----	Biological research-----	141	do-----	1962	450,890
Do-----	Radiation biology-----	1007	Expansion-----	1964	132,136
Do-----	Alcohol studies-----	1025	New construction-----	1964	327,638
Do-----	Chemistry and bacteriology-----	322	Remodeling-----	1958	19,765
Do-----	Entomology research-----	970	do-----	1962	8,275
Do-----	Sanitary engineering-----	381	Equipment-----	1959	4,079
Do-----	Psychology and nutrition-----	817	New construction-----	1964	177,171
Do-----	Radiobiology-----	594	do-----	1961	25,000
Do-----	Pharmacy-----	767	Remodeling-----	1962	15,467
Do-----	Sanitary engineering-----	714	Expansion-----	1963	48,963
Do-----	Psychopharmacology-----	859	New construction-----	1964	19,837
South Jersey Medical Research Foundation, Camden-----	Tissue culture research-----	408	Remodeling-----	1959	5,000
Do-----	Cell research-----	3044	New construction-----	1963	92,574
St. Barnabas Medical Center, Newark-----	Medical research-----	383	do-----	1965	50,000
Vineland State School, Vineland-----	Mental health research-----	347	Expansion and remodeling-----	1960	9,972
NEW MEXICO (total)-----					824,633
Lovelace Foundation, Albuquerque-----	Basic medical and clinical research-----	174	New construction-----	1959	166,242
Do-----	do-----	1033	do-----	1965	466,478
New Mexico College of Agriculture & Mechanical Arts, University Park-----	Sanitary engineering-----	370	do-----	1959	20,675
New Mexico Highlands University, Las Vegas-----	Medicinal chemistry-----	58	do-----	1959	150,000
University of New Mexico, Albuquerque-----	do-----	380	Expansion-----	1959	21,238

NEW YORK (total)				28,881,556
Adelphi University, Garden City	Psychology	334	Remodeling	1958 10,933
Albany Medical College of Union University, Albany	Medical research	6	New construction	1957 45,000
Do	do	565	New construction and remodeling	1964 1,343,674
The Animal Medical Center, New York	Veterinary medical research	619	New construction	1964 210,533
Astor Home for Children, Rhinebeck	Mental health research	515	do	1964 78,695
Beth Israel Medical Center, New York	Medical research	511	Remodeling	1963 184,865
Brookdale Hospital Center, Brooklyn	do	627	New construction	1963 204,844
Brooklyn Botanic Garden, Brooklyn (facility at Kitchewan)	Chemical and biological research	184	do	1960 91,800
Buffalo Children's Hospital, Buffalo	Virology	149	Expansion	1958 57,933
Buffalo General Hospital, Buffalo	Clinical research	980	do	1962 30,000
Columbia University College of Physicians & Surgeons, New York	Medical research	1	New construction and remodeling	1959 399,346
Columbia University, New York	Biophysics and physiology	353	Remodeling	1959 32,102
Do	Nutritional research	585	New construction and remodeling	1965 3,744,240
Do	Psychology	984	Remodeling	1963 18,258
Cornell University, New York	Medical science research	256	New construction and remodeling	1964 1,315,346
Cornell University, Ithaca	Disease-free animal research	102	New construction	1958 75,000
Do	Radiation biology	486	do	1960 45,000
Do	Sanitary engineering	488	do	1959 9,905
Do	Microbiological research	623	do	1961 45,325
Eastman Dental Dispensary, Rochester	Basic science research	592	Remodeling	1960 5,786
Do	Dental research	956	Expansion	1965 254,666
Health Research, Inc., Buffalo (facility at West Seneca)	Cancer and allied diseases	692	New construction	1962 243,172
Hospital for Joint Diseases, New York	Orthopedic research	760	do	1963 644,858
Hospital for Special Surgery, New York	Orthopedic surgery	54	do	1960 343,281
Human Resources Foundation, Albertson	Rehabilitation research	697	Expansion	1961 195,748
Institute for the Crippled & Disabled, New York	do	680	New construction	1962 159,255
Jewish Chronic Disease Hospital, New York	Chronic disease research	117	Equipment	1958 86,468
Jewish Hospital of Brooklyn, Brooklyn	Clinical research	74	New construction	1961 288,825
Long Island Biological Association, Cold Spring Harbor	Biology	599	Expansion and remodeling	1961 70,000
Long Island University, Brooklyn	do	472	Remodeling	1959 18,505
Do	Biochemical research	773	do	1962 17,600
Long Island University (C. W. Post College), Brookville	Psychological sciences	484	Expansion	1959 7,225
Do	do	595	Equipment	1961 3,515
Maimonides Hospital of Brooklyn, Brooklyn	Clinical research	424	New construction	1962 569,792
Mary Imogene Bassett Hospital, Cooperstown	do	243	Expansion	1962 299,187
Do	Medical research	947	New construction	1963 34,747
Do	Radiation research	638	do	1960 20,000
Do	Disease-free animal research	874	do	1962 32,869
Medical Foundation of Buffalo, Buffalo	Basic medical research	498	Remodeling	1959 12,595
Do	do	771	New construction	1962 157,457
Memorial Sloan-Kettering Cancer Center, New York	Cancer and allied diseases	597	do	1965 2,696,426
Memorial Sloan-Kettering Cancer Center, Rye	Cancer research	25	do	1959 1,152,750
Millard Fillmore Hospital, Buffalo	Medical research	555	Remodeling	1960 60,000
Misericordia Hospital, Bronx	Medical and surgical research	257	Expansion	1959 40,000
Montefiore Hospital, Bronx	Research in chronic diseases	390	Remodeling	1962 314,541
Do	Steroid research	823	New construction and remodeling	1964 453,057

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
NEW YORK—Continued					
Mount Sinai Hospital, New York	Pathology	344	Remodeling	1960	\$42,678
Do.	Medical research	372	New construction	1960	50,551
New York Medical College Flower & Fifth Avenue Hospitals, New York	Medical and clinical research	842	do.	1964	2,549,981
New York, State of (Department of Health), Roswell Park Memorial Institute, Buffalo	Cancer and allied diseases	21	do.	1962	702,525
Do.	Cell and virus research	1011	do.	1965	1,500,000
New York, State of (Department of Mental Hygiene), New York	Psychiatry	279	Remodeling	1962	66,000
New York, State of (Department of Mental Hygiene), Albany	do.	917	do.	1964	16,915
New York, State of (Department of Mental Hygiene), Rockland State Hospital, Orangeburg	Mental health	278	Expansion	1963	240,603
New York University, New York	Medical science research	323	Remodeling	1959	45,060
Do.	Basic and clinical medical research	329	New construction	1962	1,632,680
Do.	Environmental medicine research	1111	New construction and remodeling	1964	272,980
Do.	Clinical research	12	Remodeling	1957	75,298
Do.	Dental research	656	Expansion	1963	69,800
Do.	Mental health	3063	Remodeling	1965	156,701
Rockefeller Institute for Medical Research, New York	Basic medical research	9	New construction	1961	690,000
St. Clare's Hospital, New York	Medical research	136	Equipment	1958	10,771
St. John's University, Jamaica	Biology and pharmacy	169	New construction	1958	135,295
St. Joseph's Hospital, Syracuse	Pathology research	155	Expansion	1958	7,306
St. Luke's Hospital, New York	Clinical research	361	Remodeling	1958	44,161
Do.	Surgical research	899	Expansion	1964	45,067
Do.	Hematology and gastroenterology	986	Remodeling	1964	58,056
St. Vincent's Hospital, New York	Basic medical and clinical research	133	New construction	1965	882,410
State University of New York at Buffalo, Buffalo	Nuclear research in medicine	294	do.	1961	250,000
Do.	Basic science research	57	do.	1958	795,750
Do.	Health sciences	413	do.	1961	420,680
Do.	Dental research	973	Expansion	1964	109,567
State University of New York, College of Agriculture at Cornell, Ithaca	Pesticide residue research	171	Remodeling	1958	18,767
Staten Island Mental Health Society, Staten Island	Mental health	688	Expansion and remodeling	1961	27,743
Syracuse University, Syracuse	Zoology research	439	Remodeling	1960	23,626
Do.	Biological research	608	New construction	1963	374,301
Do.	Zoology	892	Remodeling	1963	57,377
Trudeau Foundation, Saranac Lake	Pulmonary diseases	3200	New construction	1964	514,212
University of Rochester, Rochester	Medical and dental research	131	do.	1959	248,681
Do.	Surgery	1123	Remodeling	1963	56,613
Waldemar Medical Research Foundation, Woodbury	Medical research	790	New construction	1965	271,945

Yeshiva University, Albert Einstein College of Medicine, Bronx.	Clinical and basic medical research.....	104	Remodeling.....	1961	242,332
Yeshiva University, New York.....	Biological and chemical research.....	445	do.....	1959	50,000
					5,074,364
NORTH CAROLINA (total).....					88,076
The Agricultural & Technical College of North Carolina, Greensboro.	Biochemistry.....	901	New construction.....	1964	1,062,325
Bowman Gray Medical School of Wake Forest College, Winston-Salem.	Clinical, medical sciences research.....	59	New construction and expansion..	1960	
Do.....	Vivarium.....	1117	New construction.....	1964	176,044
Duke University, Durham.....	Medical research.....	82	Expansion.....	1959	105,000
Do.....	Basic medical research.....	238	New construction.....	1959	215,000
Do.....	Life sciences.....	298	Expansion.....	1962	234,500
Do.....	Geriatric research.....	367	do.....	1963	408,628
Do.....	Clinical research.....	705	do.....	1963	814,026
North Carolina State University at Raleigh	Genetics.....	600	New construction.....	1960	20,000
Do.....	Animal research.....	810	do.....	1962	51,005
Do.....	Nutritional research.....	795	do.....	1963	200,920
University of North Carolina, Chapel Hill	Pathology.....	268	do.....	1960	39,325
Do.....	Pharmacy.....	401	do.....	1962	50,184
Do.....	Research in basic sciences.....	387	do.....	1963	536,820
Do.....	Public health research.....	483	Expansion.....	1964	726,001
Do.....	Biological research.....	712	New construction.....	1964	306,510
Wrightsville Pediatric Research Institute, Wilmington	Pediatrics.....	825	do.....	1963	40,000
NORTH DAKOTA (total).....					293,856
North Dakota State University, Fargo.....	Pharmacy.....	143	New construction.....	1960	125,417
Do.....	Biochemical research.....	743	Remodeling.....	1961	5,575
Do.....	Bacteriology.....	932	do.....	1963	4,647
University of North Dakota, Grand Forks	Biochemical research.....	271	New construction.....	1959	74,190
Do.....	Health related chemistry.....	655	do.....	1962	84,027
OHIO (total).....					9,576,941
Case Institute of Technology, Cleveland.....	Sanitary engineering.....	622	Equipment.....	1961	25,000
Children's Hospital, Cincinnati.....	Pediatric research.....	275	Expansion and remodeling.....	1961	325,037
Children's Hospital, Columbus.....	do.....	261	New construction and expansion..	1962	179,184
Cincinnati General Hospital, Cincinnati.....	Basic medical and clinical research.....	749	Remodeling.....	1965	157,577
Cleveland Clinic Foundation, Cleveland.....	Medical research.....	654	do.....	1961	118,033
Cleveland Metropolitan General Hospital, Cleveland.....	Basic medical and clinical research.....	646	Expansion.....	1964	349,543
Elizabeth Gamble Deaconess Home Association, Cincinnati.	Medical research.....	7	do.....	1958	195,025
Do.....	do.....	852	New construction.....	1963	137,500
Fels Research Institute, Yellow Springs.....	Psychophysiological research.....	247	New construction and remodeling.....	1959	97,912
Do.....	Human behavior.....	1092	New construction.....	1963	14,943
Highland View Hospital, Cleveland.....	Nutrition and metabolism.....	287	Remodeling.....	1960	17,848
The Jewish Hospital (May Institute for Medical Research), Cincinnati.	Medical and surgical research.....	229	do.....	1959	37,500
Do.....	do.....	1018	Expansion.....	1963	38,012
Oberlin College, Oberlin.....	Basic sciences research.....	437	New construction and remodeling.....	1963	77,628

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
OHIO—Continued					
Ohio Agricultural Experiment Station, Wooster	Veterinary science	678	New construction	1962	90,000
The Ohio Rehabilitation Center, Columbus	Rehabilitation research	219	do	1962	59,614
Ohio State University, Columbus	Dental research	5	Expansion	1960	290,000
Do.	Medical research	18	do	1961	1,133,573
Do.	Human physiology	613	Remodeling	1961	8,850
Do.	Vision	614	do	1962	75,932
Do.	Optometry	659	Expansion	1961	32,900
Do.	Animal physiology	590	Equipment	1961	13,450
Do.	Water pollution	411	Expansion	1961	90,500
Ohio State University, Columbus (Columbus Psychiatric Institute & Hospital)	Psychiatry	321	Expansion and remodeling	1963	299,775
Ohio State University, Columbus	Veterinary pathology	551	New construction	1962	350,000
Ohio Wesleyan University, Delaware	Biology	938	do	1964	89,634
St. Luke's Hospital Association, Cleveland	Medical-clinical research	475	Expansion and remodeling	1960	32,675
St. Vincent Charity Hospital, Cleveland	Medical-surgical research	299	Expansion	1963	213,646
University of Cincinnati, Cincinnati	Environmental medicine and industrial	884	do	1964	483,490
Do.	Medical research	23	New construction and remodeling	1961	857,821
Do.	Sanitary engineering	1032	Remodeling	1963	7,921
Do.	Radiology	3002	New construction	1965	41,450
Western Reserve University, Cleveland	Surgical research	140	Remodeling	1957	5,799
Do.	Pathology and basic medical research	192	do	1964	1,171,901
Do.	Behavioral sciences research	427	do	1959	10,051
Do.	Life sciences	589	New construction	1963	400,000
Western Reserve University and University Hospitals of Cleveland, Cleveland	Medical and clinical research	191	New construction and expansion	1962	2,047,217
OKLAHOMA (total)					1,173,122
Oklahoma Medical Research Foundation, Oklahoma City	Clinical research	883	Expansion	1964	100,041
Oklahoma State University of Agriculture & Applied Science, Stillwater	Chemical research	214	Remodeling	1958	9,975
Do.	Life sciences research	349	New construction	1960	150,000
Panhandle Agricultural & Mechanical College, Goodwell	Biology	496	Equipment	1961	4,513
University of Oklahoma, Oklahoma City	Basic medical and clinical research	84	New construction	1962	504,329
University of Oklahoma, Norman	Life sciences research	481	do	1960	48,225
Do.	Sanitary science research	738	do	1965	29,839
Do.	Botany and microbiology	1112	do	1965	326,200

OREGON (total).....					2,586,221
Good Samaritan Hospital, Portland.....	Basic medical and clinical research.....	469	Remodeling.....	1960	11,775
Linfield Research Institute, McMinnville.....	Radio biological research.....	447	Expansion.....	1960	25,000
Oregon State University, Corvallis.....	Life sciences.....	170	New construction.....	1960	497,569
Do.....	Health sciences.....	834	do.....	1964	177,640
Providence Hospital, Portland.....	Medical and clinical research.....	454	Remodeling.....	1961	8,870
Reed College, Portland.....	Biological research.....	250	New construction.....	1959	133,165
Do.....	Medicinal chemistry.....	474	Expansion and remodeling.....	1960	47,529
University of Oregon, Portland.....	Medical science research.....	354	New construction.....	1963	1,297,955
Do.....	Dental research.....	405	Remodeling.....	1960	9,877
Do.....	do.....	482	New construction.....	1961	71,900
University of Oregon, Eugene.....	Biochemistry, biology, and molecular biology.....	448	do.....	1962	304,941
PENNSYLVANIA (total).....					9,738,715
Albert Einstein Medical Center, Philadelphia.....	Medical-clinical research.....	325	New construction.....	1960	300,459
Bryn Mawr College, Bryn Mawr.....	Biology research.....	40	do.....	1959	314,157
Carnegie Institute of Technology, Pittsburgh.....	Psychology.....	1108	Remodeling.....	1963	45,300
Children's Hospital of Philadelphia, Philadelphia.....	Pediatric research.....	794	Expansion.....	1961	7,389
Children's Hospital of Pittsburgh, Pittsburgh.....	do.....	227	Equipment.....	1959	20,171
Donald Guthrie Foundation, Sayre.....	Medical research.....	497	New construction.....	1959	8,176
Elwyn Training School, Elwyn.....	Mental health.....	290	Equipment.....	1959	25,000
Eye & Ear Hospital of Pittsburgh, Pittsburgh.....	Eye and ear research.....	425	Expansion.....	1965	108,767
Haverford College, Haverford.....	Life sciences.....	929	Remodeling.....	1964	99,494
Home for Jewish Aged, Philadelphia.....	Geriatrics research.....	176	Equipment.....	1957	6,750
Institute for Cancer Research, Philadelphia.....	Cancer research.....	3031	New construction.....	1965	750,000
Jefferson Medical College of Philadelphia, Philadelphia.....	Biochemistry.....	119	Remodeling.....	1957	30,749
Do.....	Psychiatry.....	120	do.....	1957	22,235
Do.....	Surgery.....	121	do.....	1957	51,883
Do.....	Blood and plasma fractionation.....	122	do.....	1957	24,672
Do.....	Radiology.....	1017	do.....	1965	165,035
Lankenau Hospital, Philadelphia.....	Metabolic research.....	1169	do.....	1963	26,489
LaSalle College, Philadelphia.....	Health sciences.....	545	Equipment.....	1960	8,497
Magee Women's Hospital, Pittsburgh.....	Obstetrics, gynecology, and pediatrics.....	210	Expansion.....	1961	210,246
Do.....	do.....	1076	New construction.....	1965	232,512
Moore School of Electrical Engineering, Philadelphia.....	Electrimerical research.....	180	do.....	1958	58,000
Pennsylvania State University, University Park.....	Sanitary engineering.....	765	Remodeling.....	1962	9,671
Pennsylvania State Department of Health (Henry R. Landis State Hospital), Philadelphia.....	Medical and clinical research.....	833	New construction.....	1964	110,915
Philadelphia General Hospital, Philadelphia.....	Cardiovascular research.....	239	Remodeling.....	1963	49,263
Philadelphia Psychiatric Hospital, Philadelphia.....	Mental health.....	561	Expansion and remodeling.....	1960	45,114
Presbyterian Hospital, Philadelphia.....	Medical science research.....	463	New construction.....	1962	255,727
St. Christopher's Hospital, Philadelphia.....	Pediatric research.....	871	New construction and remodeling.....	1965	252,987
Skin & Cancer Hospital of Philadelphia, Philadelphia.....	Dermatology.....	1174	New construction.....	1965	404,482
Swarthmore College, Swarthmore.....	Biology.....	752	do.....	1963	80,886
Temple University, Philadelphia.....	Medical research.....	628	do.....	1963	1,528,092

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
PENNSYLVANIA—Continued					
University of Pennsylvania, Philadelphia.....	Pharmacology.....	295	Remodeling.....	1960	\$77,924
Do.....	Radiological research.....	8	New construction.....	1958	212,254
Do.....	Medical research.....	62	do.....	1961	1,730,095
Do.....	Dental research.....	83	New construction and expansion..	1958	146,109
Do.....	Dermatology.....	828	Expansion.....	1963	79,824
Do.....	Basic and clinical research.....	374	Remodeling.....	1960	124,600
Do.....	Environmental research.....	536	New construction.....	1961	29,629
Do.....	Biochemistry.....	969	Remodeling.....	1963	72,848
University of Pittsburgh, Pittsburgh.....	Public health research.....	27	Equipment.....	1958	82,920
Do.....	Basic medical research.....	75	Expansion.....	1960	582,454
Do.....	Rheumatological and orthopedic.....	610	do.....	1961	64,085
Do.....	Anesthesiology.....	1084	do.....	1963	62,016
Do.....	Surgery.....	1095	do.....	1963	40,393
Do.....	Physiology.....	981	do.....	1963	67,611
Do.....	Life sciences.....	116	Equipment.....	1959	57,456
Wills Eye Hospital, Philadelphia.....	Ophthalmology.....	165	New construction.....	1959	94,700
Wistar Institute of Anatomy & Biology, Philadelphia.....	Basic biological research.....	244	Remodeling.....	1959	205,974
Woman's Medical College of Pennsylvania, Philadelphia.....	Medical research.....	52	Expansion and remodeling.....	1961	546,038
The Woods School, Langhorne.....	Child study and research.....	38	New construction.....	1958	176,250
Zoological Society of Philadelphia (Penrose Research Laboratory), Philadelphia.....	Pathology.....	811	do.....	1962	32,600
PUERTO RICO (total).....					68,004
University of Puerto Rico, Rio Piedras.....	Basic medical research.....	677	Remodeling.....	1960	68,004
RHODE ISLAND (total).....					1,778,516
Brown University, Providence.....	Psychology research.....	2	New construction.....	1958	430,015
Do.....	Biology.....	477	Remodeling.....	1959	26,083
Do.....	do.....	539	New construction.....	1962	521,600
Do.....	Psychology.....	1125	Expansion.....	1963	105,686
Providence College, Providence.....	Basic medical research.....	801	New construction.....	1962	122,736
Rhode Island Hospital, Providence.....	Cancer research.....	153	do.....	1959	25,000
Do.....	do.....	904	Expansion.....	1962	110,627
University of Rhode Island, Kingston.....	Biology.....	637	Remodeling.....	1960	13,876
Do.....	Pharmacy.....	3074	New construction and expansion..	1964	348,065
Do.....	Sanitary engineering.....	905	Remodeling.....	1963	74,828

SOUTH CAROLINA (total).....					558,484
Clemson University, Clemson.....	Food technology and nutrition.....	521	Remodeling.....	1961	9,446
Medical College of South Carolina, Charleston.....	Basic medical and clinical research.....	671	New construction.....	1964	549,038
SOUTH DAKOTA (total).....					123,831
State University of South Dakota, Vermillion.....	Basic medical sciences.....	420	New construction and expansion..	1961	123,831
TENNESSEE (total).....					3,420,998
Baptist Memorial Hospital, Memphis.....	Cardiovascular research.....	371	Remodeling.....	1959	34,326
Meharry Medical College, Nashville.....	Basic medical research.....	320	Expansion.....	1963	196,776
St. Jude Hospital, Memphis.....	Pediatrics.....	1130	New construction and expansion..	1964	274,440
Tennessee Department of Mental Health (Clover Bottom Hospital & School), Nashville (facility at Donelson).....	Basic medical research.....	941	New construction.....	1963	15,897
University of Tennessee, Memphis.....	Research in pharmacy.....	326	Remodeling.....	1959	5,603
University of Tennessee and City of Memphis Hospital, Memphis.....	Radiological research.....	407	New construction.....	1965	144,422
University of Tennessee, Memphis.....	Dentistry and pharmacy.....	409	do.....	1963	325,000
University of Tennessee and City of Memphis Hospitals, Memphis.....	Medical science.....	999	do.....	1965	1,021,353
Vanderbilt University, Nashville.....	Medical research.....	76	New construction and remodeling..	1960	209,285
Do.....	do.....	204	Expansion and remodeling.....	1962	98,171
Do.....	Endocrinology, pediatrics, cardiology, and genetics.....	533	Remodeling.....	1964	16,102
Do.....	Medical research.....	318	New construction.....	1963	700,000
Do.....	Medical and clinical research.....	1046	Expansion.....	1964	222,861
Do.....	Physiology.....	541	Remodeling.....	1964	17,016
Do.....	Sanitary engineering.....	943	do.....	1963	21,675
Do.....	Obstetrics and gynecology.....	1144	do.....	1964	118,071
TEXAS (total).....					4,363,952
Agricultural & Mechanical College of Texas, College Station.....	Plant pathology and air pollution.....	818	New construction.....	1963	45,000
Board for Texas State Hospitals & Special Schools (Houston State Psychiatric Institute), Houston.....	Psychiatry.....	584	Equipment.....	1961	87,291
The Driscoll Foundation, Corpus Christi.....	Nutritional research.....	1148	Expansion.....	1964	14,118
Scott & White Memorial Hospital (Scott, Sherwood & Brindley Foundation), Temple.....	Clinical research.....	867	New construction.....	1963	123,001
Southwest Foundation for Research & Education, San Antonio.....	Basic medical sciences.....	13	New construction and expansion..	1960	332,773
Do.....	Primate research.....	1177	New construction.....	1964	47,400
Texas Medical Center, Inc., Houston.....	Medical sciences research.....	570	do.....	1964	3,072,699
University of Houston, Houston.....	Pharmacy research.....	208	Equipment.....	1958	3,062
Do.....	Biology research.....	465	Remodeling.....	1959	17,109
University of Texas, Austin.....	Biochemical research.....	118	Expansion.....	1959	100,000
Do.....	Sanitary engineering.....	491	Remodeling.....	1960	2,770
Do.....	Zoology.....	745	do.....	1962	82,100
University of Texas, Port Aransas.....	Research in environmental health.....	675	New construction.....	1961	104,797
University of Texas Medical Branch, Galveston.....	Basic medical research.....	802	Remodeling.....	1964	281,832
William Marsh Rice University, Houston.....	Biology.....	126	Equipment.....	1958	50,000

Health research facilities completed, title VII-A, through Dec. 31, 1965—Continued

Applicant	Type of research	Grant No.	Type of construction	Year of completion	Amount awarded, 1956-65
UTAH (total).....					2,723,866
Holy Cross Hospital, Salt Lake City.....	Basic medical sciences.....	100	Expansion.....	1961	25,000
University of Utah, Salt Lake City.....	Medical sciences.....	125	New construction.....	1965	2,422,709
Utah State University, Logan.....	Animal metabolism and nutrition.....	63	Expansion and remodeling.....	1958	26,157
Do.....	Water research.....	3155	New construction.....	1965	250,000
VERMONT (total).....					1,306,475
Degoesbriand Memorial Hospital, Burlington.....	Physiology and cardiovascular research.....	307	New construction.....	1959	96,475
University of Vermont, Burlington.....	Medical and clinical research.....	50	do.....	1959	495,639
Do.....	Psychology.....	567	Remodeling.....	1960	6,000
Do.....	Pathological research.....	702	New construction.....	1963	708,361
VIRGINIA (total).....					1,916,178
Medical College of Virginia, Richmond.....	Medical sciences research.....	105	New construction and remodeling.....	1959	170,123
Do.....	Surgical research.....	505	Expansion.....	1961	110,000
University of Virginia, Charlottesville.....	Medical research.....	280	do.....	1960	273,670
Do.....	Biology-psychology.....	3024	New construction.....	1963	951,440
Virginia Fisheries Laboratory, Gloucester Point.....	Microbiology-pathology.....	836	do.....	1962	27,345
Virginia Polytechnic Institute, Blacksburg.....	Microbiology, biochemistry, and nutrition.....	426	do.....	1961	383,600
WASHINGTON (total).....					2,242,872
Children's Orthopedic Hospital, Seattle.....	Medical research.....	769	Remodeling.....	1961	19,776
Gonzaga University, Spokane.....	Basic medical research.....	604	New construction.....	1964	25,000
King County Hospital, Seattle.....	Clinical research.....	1131	Remodeling.....	1964	142,779
Pacific Lutheran University, Tacoma.....	Biochemical research.....	1026	do.....	1963	7,710
Pacific Northwestern Research Foundation, Seattle.....	Medical research.....	897	Expansion and remodeling.....	1963	179,320
University of Washington, Seattle.....	Psychology research.....	93	Remodeling.....	1958	167,832
Do.....	Basic medical research.....	111	Expansion and remodeling.....	1960	153,255
Do.....	Dental research.....	254	Remodeling.....	1960	48,454
Do.....	Research in health sciences.....	355	Expansion.....	1960	422,681
Washington State University, Pullman.....	Air pollution.....	221	Remodeling.....	1958	13,869
Do.....	Biochemical research.....	228	do.....	1958	5,637
Do.....	Veterinary research.....	233	Expansion and remodeling.....	1961	91,656
Do.....	Biological research.....	414	do.....	1959	18,100
Do.....	Biochemistry.....	416	New construction.....	1962	205,400
Do.....	Biological sciences.....	415	do.....	1962	408,998
Do.....	Pesticide research.....	417	do.....	1961	65,000
Do.....	Sanitary engineering.....	556	do.....	1962	58,652

Do.....	Veterinary science.....	766	Remodeling.....	1961	13, 425
Do.....	Veterinary.....	1082	New construction and remodeling.....	1964	29, 379
Do.....	Viral and rickettsial diseases.....	1118	New construction.....	1964	7, 000
Washington State University, Pullman (facility at Prosser).....	Entomology.....	1061	do.....	1964	60, 000
Washington State University, Pullman.....	Psychology.....	1171	do.....	1964	98, 939
WEST VIRGINIA (total).....					266, 316
Beckley Appalachian Regional Hospital, Beckley.....	Clinical research.....	373	New construction.....	1963	79, 775
West Virginia University, Morgantown.....	Basic medical research.....	525	Equipment.....	1961	54, 850
Do.....	Basic medical sciences.....	55	New construction.....	1960	108, 904
Do.....	Medical research.....	337	Equipment.....	1960	22, 787
WISCONSIN (total).....					5, 091, 667
Central Wisconsin Colony & Training School, Madison.....	Mental health research.....	359	New construction.....	1963	161, 260
Lawrence College, Appleton.....	Biological research.....	518	Equipment.....	1960	2, 183
Madison General Hospital Medical & Surgical Foundation, Inc., Madison.....	Medical research.....	736	do.....	1964	3, 233
Marquette University, Milwaukee.....	Biological research.....	152	New construction.....	1964	285, 980
Do.....	Dental research.....	253	Remodeling.....	1959	21, 268
Do.....	Medical research.....	357	Expansion.....	1958	118, 380
Do.....	do.....	870	Remodeling.....	1961	84, 422
Do.....	Medical research (surgery).....	1133	Equipment.....	1962	15, 550
Do.....	Pharmacology and pathology.....	1126	Remodeling.....	1963	59, 708
University of Wisconsin, Madison.....	Medical sciences.....	10	Expansion and remodeling.....	1962	1, 005, 000
Do.....	Mental retardation.....	945	Expansion.....	1963	110, 000
Do.....	Pharmaceutical chemistry.....	1086	Remodeling.....	1964	137, 074
Do.....	Biochemical research.....	259	Expansion.....	1961	300, 000
Do.....	Diseases of animals.....	985	Remodeling.....	1963	30, 620
Do.....	Chemistry and pharmacy.....	441	New construction.....	1962	497, 500
Do.....	Entomology.....	987	do.....	1964	200, 000
Do.....	Psychology.....	558	Expansion.....	1961	20, 000
Do.....	Veterinary science research.....	579	New construction.....	1964	690, 731
Do.....	Genetics.....	673	do.....	1963	615, 976
Do.....	Zoology.....	700	do.....	1964	381, 501
Do.....	Psychology.....	775	do.....	1964	351, 281
WYOMING (total).....					51, 759
University of Wyoming, Laramie.....	Veterinary research.....	217	New construction.....	1958	51, 759

APPENDIX V

Geographic distribution of health research facilities, July 30, 1956 to Dec. 31, 1965

Area	Number of projects	Amount requested	Amount awarded	Percent
United States and Puerto Rico (total)	1, 045	\$461, 086, 054	\$361, 419, 724	100. 0
New England	139	61, 294, 178	48, 501, 492	13. 4
Connecticut	25	14, 372, 988	10, 514, 979	-----
Maine	7	178, 475	158, 291	-----
Massachusetts	85	37, 309, 043	30, 084, 142	-----
New Hampshire	4	1, 353, 592	1, 168, 198	-----
Rhode Island	12	4, 159, 021	3, 273, 801	-----
Vermont	6	3, 921, 059	3, 302, 081	-----
Middle Atlantic	202	104, 475, 527	81, 404, 475	22. 5
New Jersey	24	10, 126, 457	6, 884, 386	-----
New York	110	70, 267, 251	55, 097, 037	-----
Pennsylvania	68	24, 081, 819	19, 423, 052	-----
East North Central	200	91, 996, 090	66, 488, 348	18. 4
Illinois	72	37, 258, 864	26, 565, 997	-----
Indiana	25	4, 955, 562	3, 520, 800	-----
Michigan	28	18, 177, 407	13, 839, 414	-----
Ohio	49	20, 869, 312	15, 206, 910	-----
Wisconsin	26	10, 734, 945	7, 355, 227	-----
West North Central	125	29, 988, 268	24, 128, 394	6. 7
Iowa	23	3, 489, 383	2, 633, 233	-----
Kansas	16	3, 431, 364	2, 107, 712	-----
Minnesota	36	7, 401, 728	6, 571, 974	-----
Missouri	36	12, 581, 024	10, 335, 720	-----
Nebraska	6	1, 988, 022	1, 843, 102	-----
North Dakota	6	796, 624	462, 496	-----
South Dakota	2	300, 123	174, 157	-----
South Atlantic	115	47, 577, 051	40, 241, 448	11. 1
Delaware	1	406, 915	298, 155	-----
District of Columbia	9	3, 679, 942	1, 843, 006	-----
Florida	25	8, 138, 517	6, 626, 734	-----
Georgia	16	5, 951, 422	4, 706, 371	-----
Maryland	23	11, 776, 740	10, 978, 033	-----
North Carolina	25	11, 351, 690	10, 016, 664	-----
South Carolina	2	576, 172	558, 484	-----
Virginia	10	5, 079, 937	4, 947, 685	-----
West Virginia	4	615, 716	266, 316	-----
East South Central	43	15, 142, 802	13, 199, 214	8. 7
Alabama	12	2, 980, 728	2, 772, 902	-----
Kentucky	9	4, 436, 999	3, 931, 737	-----
Mississippi	4	2, 398, 161	2, 337, 863	-----
Tennessee	18	5, 326, 914	4, 156, 712	-----
West South Central	44	23, 442, 616	19, 385, 294	5. 4
Arkansas	2	1, 503, 450	1, 216, 000	-----
Louisiana	7	5, 233, 744	4, 232, 123	-----
Oklahoma	11	2, 967, 835	2, 224, 686	-----
Texas	24	13, 737, 587	11, 712, 485	-----
Mountain	56	20, 739, 862	15, 523, 020	4. 3
Arizona	11	3, 478, 431	2, 354, 086	-----
Colorado	21	6, 799, 345	4, 986, 277	-----
Idaho	1	19, 076	19, 076	-----
Montana	6	2, 157, 803	1, 026, 112	-----
Nevada	1	158, 667	56, 614	-----
New Mexico	6	2, 163, 775	2, 146, 602	-----
Utah	9	5, 902, 280	4, 882, 494	-----
Wyoming	1	60, 485	51, 759	-----
Pacific	120	66, 361, 656	52, 480, 035	14. 5
Alaska	1	791, 506	500, 000	-----
California	72	52, 731, 256	40, 473, 312	-----
Hawaii	3	1, 791, 353	1, 445, 125	-----
Oregon	17	3, 553, 228	3, 490, 679	-----
Washington	27	7, 489, 313	6, 570, 919	-----
Puerto Rico	1	68, 004	68, 004	-----

APPENDIX VI

Health research facilities awarded by professional discipline,¹ July 30, 1956, to Dec. 31, 1955

Professional discipline	Number of projects	Amount awarded
Total.....	1,045	\$361,419,724
Allergy.....	4	177,792
Anatomy.....	8	2,854,824
Anesthesiology.....	1	62,016
Arthrology and rheumatology.....	2	71,610
Basic medical sciences.....	10	8,629,365
Biochemistry.....	47	9,235,437
Biomedical engineering.....	3	963,161
Biophysics.....	11	2,984,927
Botany/phytology.....	2	371,200
Cardioangiologv.....	15	3,812,113
Chemistry.....	25	4,666,912
Cytology.....	2	519,808
Dentistry.....	26	6,802,352
Dermatology.....	4	551,832
Endocrinology.....	2	498,721
Entomology.....	7	612,872
Environmental health/sanitary engineering.....	54	9,225,673
Epidemiology.....	5	2,927,119
General biology and other biological sciences.....	106	35,769,815
General medicine.....	279	163,385,019
Genetics.....	7	3,870,662
Geriatrics.....	2	415,378
Hematology.....	4	223,221
Histology.....	3	77,548
Immunology and serology.....	1	50,000
Industrial/occupational health specialties.....	1	483,490
Infectious disease.....	3	2,553,400
Internal medicine.....	2	66,000
Medical technology.....	1	492,000
Mental health and retardation.....	21	5,330,329
Metabolism.....	7	400,761
Microbiology/bacteriology, parasitology.....	18	5,517,142
Molecular biology.....	3	1,915,341
Neurology.....	6	735,224
Neurosurgery.....	1	95,938
Nutrition.....	17	4,604,470
Obstetrics and gynecology.....	7	2,003,479
Oncology.....	18	9,610,423
Ophthalmology.....	8	1,550,605
Optometry.....	1	32,900
Organ and tissue transplant.....	2	145,516
Orthopedic surgery.....	5	1,188,570
Other disease specialties.....	1	514,212
Other paramedical specialties.....	1	426,690
Other public health specialties.....	7	2,566,816
Otolaryngology.....	6	290,384
Pathology.....	13	2,435,067
Pediatrics and nepiology.....	20	5,379,453
Pharmacology/toxicology.....	15	1,651,957
Pharmacy.....	24	3,564,969
Physical medicine and rehabilitation.....	6	2,385,973
Physics.....	2	306,392
Physiology and endocrinology.....	22	4,291,107
Psychiatry.....	29	5,817,230
Psychology.....	41	6,796,004
Public health/preventive medicine.....	4	6,347,025
Radiobiology.....	10	5,218,074
Radiology.....	11	1,869,659
Speech and audiology.....	1	24,331
Statistical and experimental design.....	3	546,106
Surgery.....	22	3,399,335
Veterinary medicine.....	43	8,938,369
Virology.....	3	1,584,215
Zoology.....	10	1,581,391

¹ Many areas of research are usually studied in each facility. The table identifies only the principal research area in the facility.

APPENDIX VII

Health research facilities awarded by type of institution, July 30, 1956 to Dec. 31, 1965

Type of institution	Number of projects ¹	Amount awarded	Percent	Average
Total	1,045	\$361,419,724	100.0	\$345,856
Schools	729	285,064,891	78.9	391,036
Medical	294	185,863,404	51.4	632,188
Dental	28	8,093,302	2.3	289,047
Public health	11	8,204,747	2.3	745,886
Pharmacy	23	3,657,617	1.0	159,027
Osteopathy	1	5,469	-----	5,469
Other ²	372	79,240,352	21.9	213,012
Other institutions	316	76,354,833	21.1	241,629
Hospitals	211	49,649,891	13.7	235,308
Research institutes	105	26,704,942	7.4	254,333

¹ Distribution has been adjusted by 8 projects, covering multiple schools of medicine, dentistry, pharmacy, and public health, in order to avoid dual reporting.

² Technical colleges, schools of veterinary medicine, chemistry and biological sciences.



